

Connecting via Winsock to STN

10/510,435
(Please scan
into case)

Welcome to STN International! Enter x:x

LOGINID:sssptau129pxo

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 AUG 09 INSPEC enhanced with 1898-1968 archive
NEWS 4 AUG 28 ADISCTI Reloaded and Enhanced
NEWS 5 AUG 30 CA(SM)/Caplus(SM) Austrian patent law changes
NEWS 6 SEP 11 CA/Caplus enhanced with more pre-1907 records
NEWS 7 SEP 21 CA/Caplus fields enhanced with simultaneous left and right
truncation
NEWS 8 SEP 25 CA(SM)/Caplus(SM) display of CA Lexicon enhanced
NEWS 9 SEP 25 CAS REGISTRY(SM) no longer includes Concord 3D coordinates
NEWS 10 SEP 25 CAS REGISTRY(SM) updated with amino acid codes for pyrrolysine
NEWS 11 SEP 28 CEABA-VTB classification code fields reloaded with new
classification scheme
NEWS 12 OCT 19 LOGOFF HOLD duration extended to 120 minutes
NEWS 13 OCT 19 E-mail format enhanced
NEWS 14 OCT 23 Option to turn off MARPAT highlighting enhancements available
NEWS 15 OCT 23 CAS Registry Number crossover limit increased to 300,000 in
multiple databases
NEWS 16 OCT 23 The Derwent World Patents Index suite of databases on STN
has been enhanced and reloaded
NEWS 17 OCT 30 CHEMLIST enhanced with new search and display field
NEWS 18 NOV 03 JAPIO enhanced with IPC 8 features and functionality
NEWS 19 NOV 10 CA/Caplus F-Term thesaurus enhanced
NEWS 20 NOV 10 STN Express with Discover! free maintenance release Version
8.01c now available
NEWS 21 NOV 13 CA/Caplus pre-1967 chemical substance index entries enhanced
with preparation role
NEWS 22 NOV 20 CAS Registry Number crossover limit increased to 300,000 in
additional databases
NEWS 23 NOV 20 CA/Caplus to MARPAT accession number crossover limit increased
to 50,000
NEWS 24 NOV 20 CA/Caplus patent kind codes will be updated

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS LOGIN Welcome Banner and News Items
NEWS IPC8 For general information regarding STN implementation of IPC 8
NEWS X25 X.25 communication option no longer available

Enter NEWS followed by the item number or name to see news on that
specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 02:53:57 ON 27 NOV 2006

| | | |
|----------------------|------------|---------|
| => file reg | | |
| COST IN U.S. DOLLARS | SINCE FILE | TOTAL |
| | ENTRY | SESSION |
| FULL ESTIMATED COST | 0.21 | 0.21 |

FILE 'REGISTRY' ENTERED AT 02:54:45 ON 27 NOV 2006
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2006 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 24 NOV 2006 HIGHEST RN 913944-64-6
 DICTIONARY FILE UPDATES: 24 NOV 2006 HIGHEST RN 913944-64-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

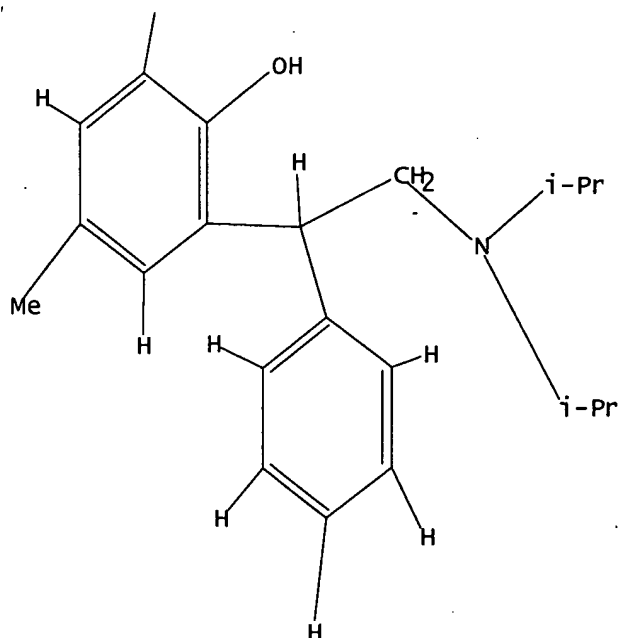
REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=>
 Uploading C:\Program Files\Stnexp\Queries\10510435.str

L1 STRUCTURE UPLOADED

=> d l1
 L1 HAS NO ANSWERS
 L1 STR



structure attributes must be viewed using STN Express query preparation.

=> s 11

SAMPLE SEARCH INITIATED 02:58:46 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 0 TO ITERATE

100.0% PROCESSED 0 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 0 TO 0
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> search 11

ENTER TYPE OF SEARCH (SSS), CSS, FAMILY, OR EXACT:.
ENTER SCOPE OF SEARCH (SAMPLE), FULL, RANGE, OR SUBSET:full
FULL SEARCH INITIATED 02:58:54 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 7 TO ITERATE

100.0% PROCESSED 7 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L3 0 SEA SSS FUL L1

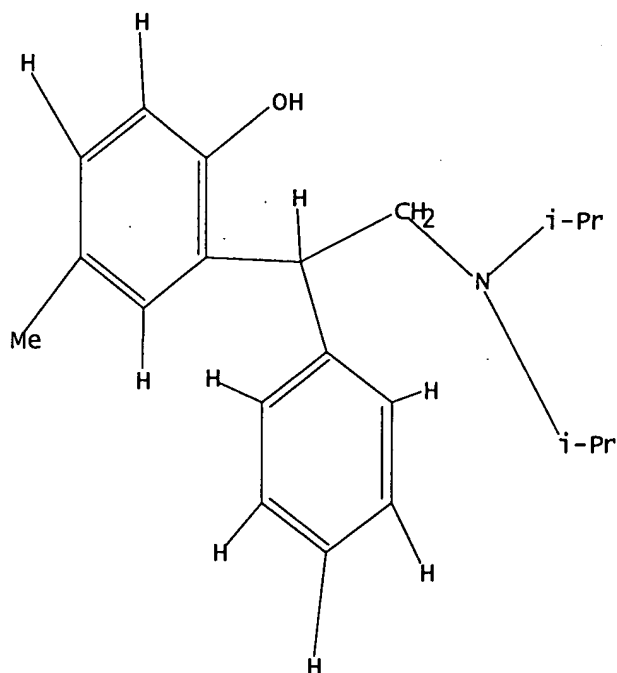
=>

Uploading C:\Program Files\Stnexp\Queries\10510435a.str

L4 STRUCTURE UPLOADED

=> d 14

L4 HAS NO ANSWERS
L4 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 14

SAMPLE SEARCH INITIATED 03:01:34 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 0 TO ITERATE

100.0% PROCESSED 0 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE ***COMPLETE**
BATCH ***COMPLETE**
PROJECTED ITERATIONS: 0 TO 0
PROJECTED ANSWERS: 0 TO 0

L5 0 SEA SSS SAM L4

=> search 14

ENTER TYPE OF SEARCH (SSS), CSS, FAMILY, OR EXACT:.
ENTER SCOPE OF SEARCH (SAMPLE), FULL, RANGE, OR SUBSET:full
FULL SEARCH INITIATED 03:01:40 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 7 TO ITERATE

100.0% PROCESSED 7 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L6 0 SEA SSS FUL L4

=> s tolteridine

L7 0 TOLTERIDINE

=> s tolterodine
L8 7 TOLTERODINE

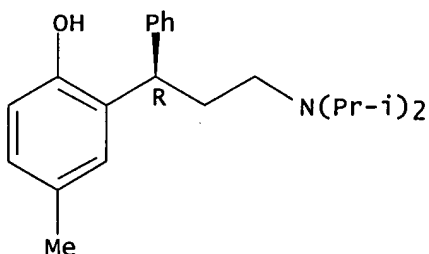
=> d 18

L8 ANSWER 1 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
RN 209747-05-7 REGISTRY
ED Entered STN: 11 Aug 1998
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
(2R,3R)-2,3-dihydroxybutanedioate (salt) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
[R-(R*,R*)]-2,3-dihydroxybutanedioate (salt)
OTHER NAMES:
CN (R)-Tolterodine L-tartrate
FS STEREOSEARCH
MF C22 H31 N O . x C4 H6 O6
SR CA
LC STN Files: CA, CAPLUS, CASREACT, IMSPATENTS, IMSRESEARCH, USPATFULL

CM 1

CRN 124937-51-5
CMF C22 H31 N O

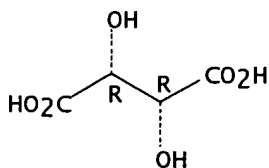
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



6 REFERENCES IN FILE CA (1907 TO DATE)
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

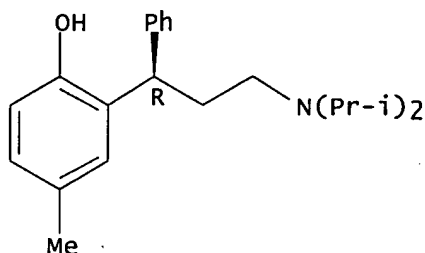
=> d 1-7

L8 ANSWER 1 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 209747-05-7 REGISTRY
 ED Entered STN: 11 Aug 1998
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
 (2R,3R)-2,3-dihydroxybutanedioate (salt) (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
 [R-(R*,R*)]-2,3-dihydroxybutanedioate (salt)
 OTHER NAMES:
 CN (R)-Tolterodine L-tartrate
 FS STEREOSEARCH
 MF C22 H31 N O . x C4 H6 O6
 SR CA
 LC STN Files: CA, CAPLUS, CASREACT, IMSPATENTS, IMSRESEARCH, USPATFULL

CM 1

CRN 124937-51-5
 CMF C22 H31 N O

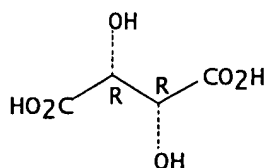
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.

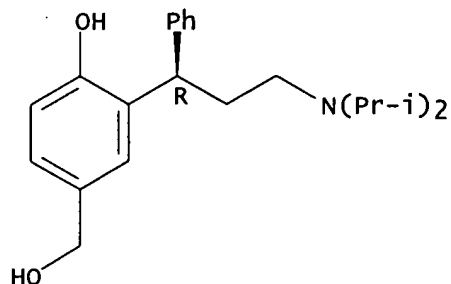


6 REFERENCES IN FILE CA (1907 TO DATE)
 6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 2 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 207679-81-0 REGISTRY
 ED Entered STN: 25 Jun 1998
 CN Benzenemethanol, 3-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-hydroxy- (9CI) (CA INDEX NAME)
 OTHER NAMES:
 CN 5-Hydroxymethyltolterodine
 CN PNU 200577
 FS STEREOSEARCH

DR 156755-19-0
 MF C22 H31 N O2
 CI COM
 SR CA
 LC STN Files: BIOSIS, CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry. Rotation (+).

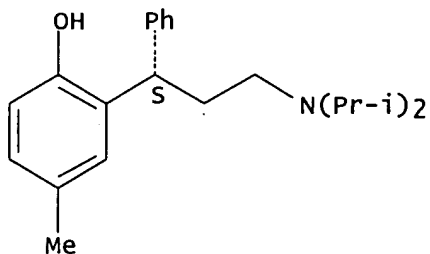


****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

43 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 43 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 3 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 124937-53-7 REGISTRY
 ED Entered STN: 26 Jan 1990
 CN Phenol, 2-[(1S)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-
 (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Phenol, 2-[3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (S)-
 OTHER NAMES:
 CN (S)-Tolterodine
 FS STEREOSEARCH
 MF C22 H31 N O
 CI COM
 SR CA
 LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry. Rotation (-).



****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

9 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

9 REFERENCES IN FILE CAPLUS (1907 TO DATE)

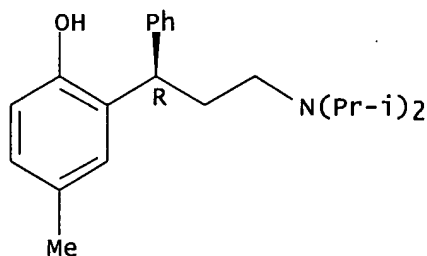
L8 ANSWER 4 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 124937-52-6 REGISTRY
 ED Entered STN: 26 Jan 1990
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
 (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Phenol, 2-[3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (R)-,
 [R-(R*,R*)]-2,3-dihydroxybutanedioate (1:1) (salt)
 OTHER NAMES:
 CN (R)-Tolterodine L-tartrate
 CN Detrol
 CN Detrusitol
 CN PNU 200583E
 CN Tolterodine tartrate
 CN Tolterodinium (+)-(2R,3R)-hydrogen tartrate (1:1)
 FS STEREOSEARCH
 MF C22 H31 N O . C4 H6 O6
 CI COM
 SR CA
 LC STN Files: ADISINSIGHT, ADISNEWS, ANABSTR, BIOSIS, CA, CAPLUS, CASREACT,
 CBNB, CHEMCATS, CIN, CSCHEM, IMSCSEARCH, IMSPATENTS, IMSRESEARCH, IPA,
 MRCK*, PATDPASPC, PROMT, PROUSDDR, PS, RTECS*, SYNTHLINE, TOXCENTER,
 USAN, USPAT2, USPATFULL
 (*File.contains numerically searchable property data)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

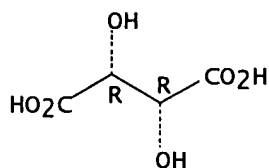


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.

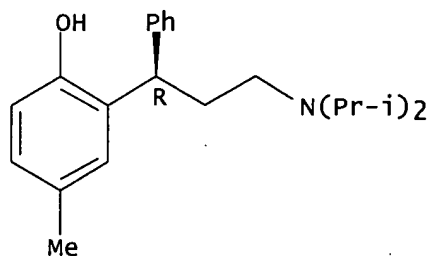


****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

82 REFERENCES IN FILE CA (1907 TO DATE)
82 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 5 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
RN 124937-51-5 REGISTRY
ED Entered STN: 26 Jan 1990
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-
(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Phenol, 2-[3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (R)-
OTHER NAMES:
CN (+)-Tolterodine
CN (R)-(+)-Tolterodine
CN (R)-N,N-Diisopropyl-3-(2-hydroxy-5-methylphenyl)-3-phenylpropanamine
CN (R)-N,N-Diisopropyl-N-[3-(2-hydroxy-5-methylphenyl)-3-phenylpropyl]amine
CN (R)-Tolterodine
CN Kabi 2234
CN PNU 200583
CN Tolterodine
FS STEREOSEARCH
DR 215929-30-9
MF C22 H31 N O
CI COM
SR CA
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BIOSIS, BIOTECHNO,
CA, CAPLUS, CASREACT, CBNB, CHEMCATS, CIN, DDFU, DRUGU, EMBASE,
IMSDRUGNEWS, IMSPATENTS, IMSRESEARCH, IPA, MEDLINE, MRCK*, PHAR, PROMT,
PROUSDDR, PS, RTECS*, SCISEARCH, SYNTHLINE, TOXCENTER, USAN, USPAT2,
USPATFULL
(*File contains numerically searchable property data)
Other Sources: WHO

Absolute stereochemistry. Rotation (+).

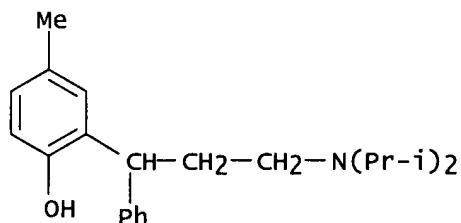


****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

267 REFERENCES IN FILE CA (1907 TO DATE)
8 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
268 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 6 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
RN 124936-75-0 REGISTRY
ED Entered STN: 26 Jan 1990
CN Phenol, 2-[3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,

hydrochloride (9CI) (CA INDEX NAME)
 OTHER NAMES:
 CN (+-)-Tolterodine hydrochloride
 CN N,N-Diisopropyl-3-(2-hydroxy-5-methylphenyl)-3-phenylpropylamine
 hydrochloride
 MF C22 H31 N O . Cl H
 SR CA
 LC STN Files: ADISINSIGHT, CA, CAPLUS, CASREACT, IMSPATENTS, IMSRESEARCH,
 TOXCENTER, USPATFULL
 CRN (124936-74-9)

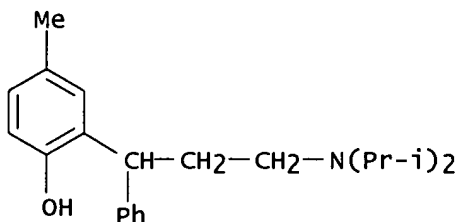


● HCl

5 REFERENCES IN FILE CA (1907 TO DATE)
 5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 7 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 124936-74-9 REGISTRY
 ED Entered STN: 26 Jan 1990
 CN Phenol, 2-[3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl- (9CI)
 (CA INDEX NAME)

OTHER NAMES:
 CN N,N-Diisopropyl-N-[3-(2-hydroxy-5-methylphenyl)-3-phenylpropyl]amine
 CN Racemic tolterodine
 MF C22 H31 N O
 CI COM
 SR CA
 LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, PS, TOXCENTER, USPAT2,
 USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

20 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 20 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> s 124937-52-6
L9 1 124937-52-6
(124937-52-6/RN)

=> s 209747-05-7
L10 1 209747-05-7
(209747-05-7/RN)

| => file caplus | SINCE FILE | TOTAL |
|----------------------|------------|---------|
| COST IN U.S. DOLLARS | ENTRY | SESSION |
| FULL ESTIMATED COST | 369.60 | 369.81 |

FILE 'CAPLUS' ENTERED AT 03:10:42 ON 27 NOV 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 27 Nov 2006 VOL 145 ISS 23
FILE LAST UPDATED: 26 Nov 2006 (20061126/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> s 19
L11 82 L9

=> s 110
L12 6 L10

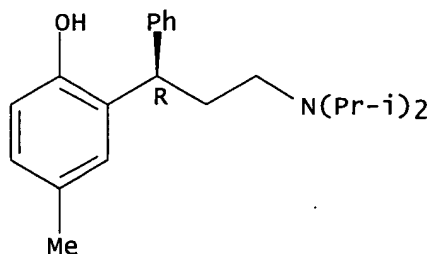
=> s 112 not 111
L13 6 L12 NOT L11

=> d 111 1-82 fbib ab hitstr

L11 ANSWER 1 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:1073192 CAPLUS
DN 145:425975
TI Method for manufacturing tolterodine tartrate soft capsule
IN Wan, Liuyi
PA Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 6pp.
CODEN: CNXXEV
DT Patent
LA Chinese
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----|---|------|----------|--------------------------------------|----------------------|
| PI | CN 1709231 | A | 20051221 | CN 2005-10080363 CN 2005-10080363 | 20050704 20050704 |
| AB | The title tolterodine tartrate soft capsule comprises a solution or suspension content which includes tolterodine tartrate and at least one substance selected from the group including solvent (preferably PEG400 or soybean oil), solution adjuvant (preferably propylene glycol), suspending agent (PEG6000), solubilizer (preferably NaOH solution or oleic acid), and surfactant (Span-80, Tween-80, etc). | | | | |
| IT | 124937-52-6, Tolterodine tartrate RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (method for manufacturing tolterodine tartrate soft capsule) | | | | |
| RN | 124937-52-6 CAPLUS | | | | |
| CN | Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME) | | | | |
| CM | 1 | | | | |
| CRN | 124937-51-5 | | | | |
| CMF | C22 H31 N O | | | | |

Absolute stereochemistry. Rotation (+).

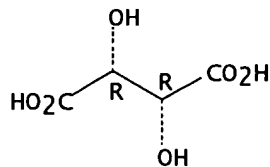


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 2 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:1006721 CAPLUS

DN 145:383488

TI Methods and compositions containing bicifadine for the treatment of urinary incontinence

IN Skolnick, Phil

PA Dov Pharmaceutical, Inc., USA

SO PCT Int. Appl., 50pp.

CODEN: PIXXD2

DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----|--|------|----------|-----------------|----------|
| PI | WO 2006102029 | A2 | 20060928 | WO 2006-US9638 | 20060317 |
| | WO 2006102029 | A3 | 20061109 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |

US 2005-664002P P 20050321

AB Methods and compns. containing bicifadine are provided for the prevention and treatment of lower urinary tract disorders in mammalian subjects. The methods and compns. may be used to prevent or treat urinary incontinence, urinary urgency, nocturia, and enuresis associated with neurogenic and non-neurogenic overactive bladder, interstitial cystitis, prostatitis, and benign prostatic hyperplasia, among other conditions. Addnl. compns. and methods are provided which employ bicifadine in combination with a second anti-incontinence agent, or a different therapeutic agent to yield more effective anti-incontinence treatment tools, and/or dual activity therapeutic methods and formulations useful to prevent or reduce urinary incontinence and one or more addnl. symptoms such as urinary urgency, overflow, frequency, or pain in mammalian subjects. Bicifadine-HC I was prepared in a series of steps starting from p-tolylacetic acid. This was converted to polymorph form B by using isopropanol.

IT 124937-52-6, Tolterodine tartrate
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods and compns. containing bicifadine for treatment of urinary incontinence)

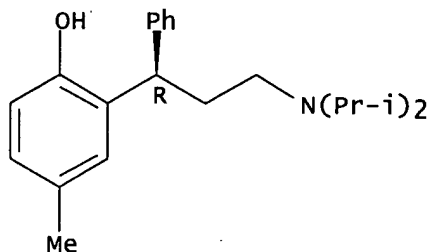
RN 124937-52-6 CAPLUS
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

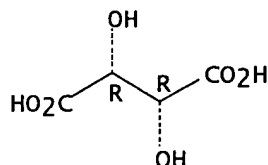
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 3 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2006:918812 CAPLUS
 DN 145:299643
 TI Antibiotic and combinations of antibiotic and symptomatic relief agent formulations
 IN Evans, Donald L.; Bryant, Thomas J.; Ping, Jeffrey H.; Roberts, Richard Howard; Sirico, William J.; Arnold, Kristin; Davis, Matthew William; Hayer, Gregory Keith; Nielsen, Kurt R.
 PA Mutual Pharmaceutical Company, Inc., USA
 SO PCT Int. Appl., 72pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|--|------|----------|-----------------|------------|
| PI | WO 2006093784 | A2 | 20060908 | WO 2006-US6412 | 20060224 |
| | W: | | | | |
| | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: | | | | |
| | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | | | | US 2005-656496P | P 20050225 |
| | | | | US 2005-671979P | P 20050415 |
| | US 2006205682 | A1 | 20060914 | US 2006-362547 | 20060224 |
| | | | | US 2005-656496P | P 20050225 |
| | | | | US 2005-671979P | P 20050415 |

AB Disclosed herein are antibiotic formulations and combinations of antibiotic and symptomatic relief agent formulations. The combinations are suitable to treat a variety of diseases, including an infection, while treating the symptoms associated with the disease. Also disclosed are methods of treating a disease or an infection and its symptoms, as well as pharmaceutical kits containing such formulations. Tablets contained trimethoprim 80, and sulfamethoxazole 400 mg.

IT 124937-52-6, Tolterodine tartrate

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (antibiotic and combinations of antibiotic and symptomatic relief agent

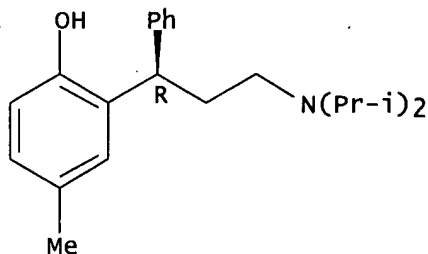
formulations)
 RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
 (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

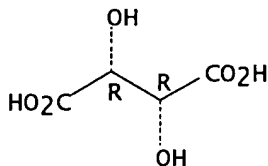


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 4 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:742863 CAPLUS

DN 145:152914

TI Stability-indicating HPLC determination of tolterodine tartrate in pharmaceutical dosage form

AU Saxena, Vinay; Zaheer, Zahid; Farooqui, Mazhar

CS Maulana Azad College, Aurangabad, 431 001, India

SO Indian Journal of Chemical Technology (2006), 13(3), 242-246

CODEN: ICHTEU; ISSN: 0971-457X

PB National Institute of Science Communication and Information Resources

DT Journal

LA English

AB A simple, selective, precise and stability-indicating high-performance liquid chromatog. (HPLC) method of anal. tolterodine tartrate in pharmaceutical dosage form was developed and validated. The chromatog. conditions comprised a reversed-phase C18 column (250 + 4.6 mm), 5 μ with a mobile phase consisting of a mixture of buffer solution (2.88 g ammonium dihydrogen orthophosphate in 1 L of water) and methanol in the ratio of 40: 60. Triethylamine (5 mL /L) was added to it and pH of mobile phase was adjusted to 7.0 \pm 0.1 with orthophosphoric acid at a flow rate of 1.5 mL/min. Detection was carried out at 220 nm. The retention

time of tolterodine was 6.49 min. The linear regression anal. data for the calibration plots showed good linear relationship with coefficient of regression value, $r^2 = 0.99$ in the concentration range 200.60-601.80 μg per mL. The value of correlation coefficient, slope and intercept were 1.0, 20.87 and -6.87, resp. The method was validated for precision, recovery, ruggedness and robustness. The drug undergoes degradation under acidic, basic, photochem. and thermal conditions. All the peaks of degraded product were resolved from the active pharmaceutical ingredient with significantly different retention time. The samples degraded with hydrogen peroxide showed no addnl. peak. This indicates that the drug is susceptible to acid-base hydrolysis, photochem. and thermal degradation. Statistical anal. proves that the method is reproducible and selective for the estimation of said drug. As the method could effectively sep. the drug from its degradation product, it can be employed as a stability-indicating one.

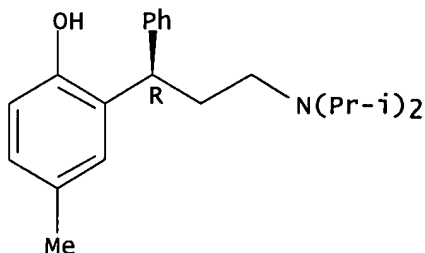
IT 124937-52-6, Tolterodine tartrate
 RL: ANT (Analyte); ANST (Analytical study)
 (stability-indicating HPLC determination of tolterodine tartrate in pharmaceutical dosage form)

RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5
 CMF C22 H31 N O

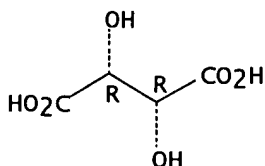
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:687413 CAPLUS
 DN 145:195647
 TI Tolterodine tartrate dripping pill and its preparation method
 IN Zhang, Xiaoming; Wang, Jun; Wu, Yuanyan
 PA Zhuhai Skypharm Technology Development Co., Ltd., Peop. Rep. China
 SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.
 CODEN: CNXXEV

DT Patent
 LA Chinese

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|------|----------|------------------|----------|
| PI | CN 1686095 | A | 20051026 | CN 2005-10034026 | 20050412 |
| | | | | CN 2005-10034026 | 20050412 |

AB The invention relates to a tolterodine tartrate dripping pill, which comprises 0.5-25% of tolterodine tartrate and 75-99.5% of matrix. The preparation method comprises adding tolterodine tartrate to melted matrix, mixing to even, dripping into a cooling to obtain dripping pills, and drying. The inventive dripping pill can disintegrate rapidly and is especially suitable for children, the elderly, bed patients, and patients with dysphagia.

IT 124937-52-6, Tolterodine tartrate
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (tolterodine tartrate dripping pill and its preparation)

RN 124937-52-6 CAPLUS

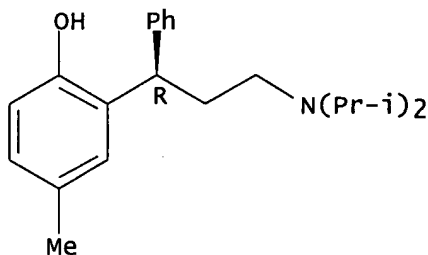
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

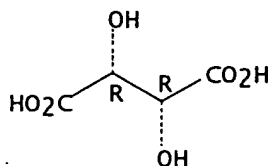


CM 2

CRN 87-69-4

CMF C4 H6 O6

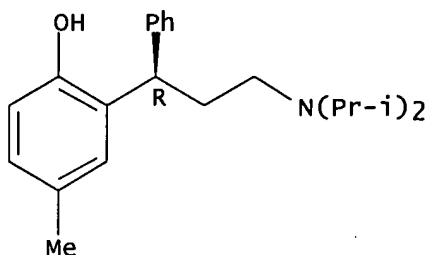
Absolute stereochemistry.



L11 ANSWER 6 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2006:687412 CAPLUS
 DN 145:174294
 TI Sustained-release tolterodine tartrate dripping pill and its preparation method
 IN Zhang, Xiaoming; Wang, Jun; Ding, Feng; Wu, Yuanyan
 PA Zhuhai Skypharm Technology Development Co., Ltd., Peop. Rep. China
 SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 5 pp.
 CODEN: CNXXEV
 DT Patent
 LA Chinese
 FAN.CNT 1

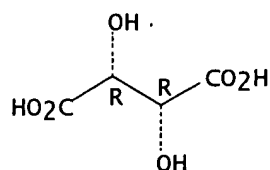
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----|---|------|----------|--------------------------------------|----------------------|
| PI | CN 1686094 | A | 20051026 | CN 2005-10034025 CN 2005-10034025 | 20050412 20050412 |
| AB | The invention relates to a sustained-release tolterodine tartrate dripping pill which comprises tolterodine tartrate 2-20%, hydrophobic matrix 1-30%, and hydrophilic matrix 40-98%. The preparation method comprises heating and melting the matrixes, adding tolterodine tartrate to form a suspension, dripping into a cooling agent to obtain dripping pills, and drying. | | | | |
| IT | 124937-52-6, Tolterodine tartrate RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (Sustained-release tolterodine tartrate dripping pill and its preparation method) | | | | |
| RN | 124937-52-6 CAPLUS | | | | |
| CN | Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME) | | | | |
| CM | 1 | | | | |
| CRN | 124937-51-5 | | | | |
| CMF | C22 H31 N O | | | | |

Absolute stereochemistry. Rotation (+).



CM 2
 CRN 87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 7 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2006:677667 CAPLUS
 DN 145:130840
 TI Process for preparing tolterodine tartrate
 IN Kovacs, Laszlo Zsolt; Szabo, Csaba; Molnarne, Erika Magyar; Singer, Claude
 PA Teva Pharmaceutical Industries, Ltd., Israel; Teva Pharmaceuticals Usa, Inc.
 SO PCT Int. Appl., 19 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 2

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| PI WO 2006074479 | A1 | 20060713 | WO 2006-US917 | 20060110 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | | | US 2005-642866P | P 20050110 |
| | | | US 2005-690823P | P 20050614 |
| US 2006194876 | A1 | 20060831 | US 2006-329915 | 20060110 |
| | | | US 2005-642866P | P 20050110 |
| | | | US 2005-690823P | P 20050614 |
| US 2006194987 | A1 | 20060831 | US 2006-329922 | 20060110 |
| | | | US 2005-642866P | P 20050110 |
| | | | US 2005-690823P | P 20050614 |

PATENT FAMILY INFORMATION:

FAN 2006:677666

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| PI WO 2006074478 | A1 | 20060713 | WO 2006-US916 | 20060110 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |

| | | | | | |
|----|------------|----|-----------------|-----------------|------------|
| | | | US 2005-642866P | P | 20050110 |
| | | | US 2005-690823P | P | 20050614 |
| US | 2006194876 | A1 | 20060831 | US 2006-329915 | 20060110 |
| | | | | US 2005-642866P | P 20050110 |
| | | | | US 2005-690823P | P 20050614 |
| US | 2006194987 | A1 | 20060831 | US 2006-329922 | 20060110 |
| | | | | US 2005-642866P | P 20050110 |
| | | | | US 2005-690823P | P 20050614 |

AB The invention encompasses processes for making tolterodine tartrate. Tolterodine hydrobromide was prepared and treated with KOH to give the free base. L-Tartaric acid was dissolved in EtOH and treated with the tolterodine to give the title compound

IT 124937-52-6P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(process for preparing tolterodine tartrate)

RN 124937-52-6 CAPLUS

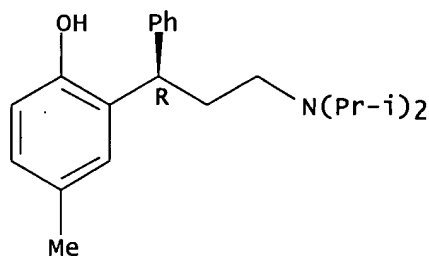
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

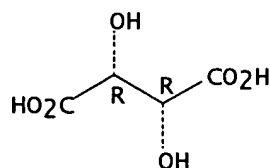
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 8 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:677666 CAPLUS

DN 145:130977

TI Substantially pure tolterodine tartrate and process for preparing thereof

IN Kovacs, Laszlo Zsolt; Szabo, Csaba; Molnarne, Erika Magyar; Singer, Claude
 PA Teva Gyogyszergyar Reszvenytarsasag, Hung.; Teva Pharmaceuticals Usa,
 Inc.; Teva Pharmaceutical Industries Ltd.
 SO PCT Int. Appl., 25 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|--|----------|-----------------|------------|
| PI | WO 2006074478 | A1 | 20060713 | WO 2006-US916 | 20060110 |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| | RW: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| | | | | US 2005-642866P | P 20050110 |
| | | | | US 2005-690823P | P 20050614 |
| | US 2006194876 | A1 | 20060831 | US 2006-329915 | 20060110 |
| | | | | US 2005-642866P | P 20050110 |
| | | | | US 2005-690823P | P 20050614 |
| | US 2006194987 | A1 | 20060831 | US 2006-329922 | 20060110 |
| | | | | US 2005-642866P | P 20050110 |
| | | | | US 2005-690823P | P 20050614 |

PATENT FAMILY INFORMATION:

FAN 2006:677667

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|--|----------|-----------------|------------|
| PI | WO 2006074479 | A1 | 20060713 | WO 2006-US917 | 20060110 |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| | RW: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| | | | | US 2005-642866P | P 20050110 |
| | | | | US 2005-690823P | P 20050614 |
| | US 2006194876 | A1 | 20060831 | US 2006-329915 | 20060110 |
| | | | | US 2005-642866P | P 20050110 |
| | | | | US 2005-690823P | P 20050614 |
| | US 2006194987 | A1 | 20060831 | US 2006-329922 | 20060110 |
| | | | | US 2005-642866P | P 20050110 |
| | | | | US 2005-690823P | P 20050614 |

AB The present invention provides substantially pure tolterodine tartrate having <0.5% of total impurities, as determined by HPLC, and a pharmaceutical composition comprising the substantially pure tolterodine tartrate and at least one pharmaceutically acceptable excipient. Thus, a solution was formed by combining the N,N-diisopropyl[3-(2-methoxy-5-methylphenyl)-3-

phenylpropyl]amine fumarate (200 g, 0.439 mol) and HBr in acetic acid and stirring at about 110° to 115° for 14 h. The solution was cooled to room temperature and ice water was added, forming a slurry. The slurry was cooled to 5°, filtered and dried at about 65° under vacuum to yield tolterodine hydrobromide (164.4 g) of 99.26% purity, as determined by HPLC. To a mixture of tolterodine hydrobromide (100 g, 0.246 mol), Et acetate and water at room temperature was added potassium hydroxide (50%, 300 mL). After stirring for approx. 15 to 30 min, two clear homogeneous layers formed. The layers were separated, and an organic phase was obtained. L-tartaric acid (38.33 g) dissolved in ethanol was added in one portion to the organic phase, at room temperature, forming a slurry. The

slurry

was cooled to 0° and maintained at this temperature for about 15 h, then it was filtered, washed and dried yielding tolterodine tartrate (62.6 g). The tolterodine tartrate was recrystd. from dry ethanol yielding tolterodine tartrate (41.2 g) of 99.84% purity, as determined by HPLC.

IT 124937-52-6P, Tolterodine tartrate

RL: ANT (Analyte); SPN (Synthetic preparation); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of substantially pure tolterodine tartrate for dosage forms)

RN 124937-52-6 CAPLUS

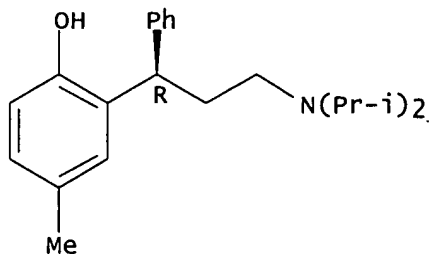
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

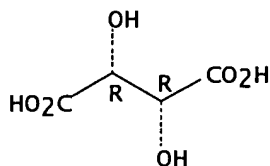


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 1

THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 9 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2006:627597 CAPLUS
 DN 145:103428
 TI Process for preparation of 3-(2-hydroxy-5-methylphenyl)-N,N-diisopropyl-3-phenylpropylamine
 IN Toplak, Renata
 PA Lek Pharmaceuticals D.D., Slovenia
 SO PCT Int. Appl., 36 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|--|----------|-----------------|----------|
| PI | WO 2006066931 | A1 | 20060629 | WO 2005-EP13899 | 20051222 |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| | RW: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |

SI 2004-349

A 20041224

OS MARPAT 145:103428
 AB A new process for the preparation of 3-(2-hydroxy-5-methylphenyl)-N,N-diisopropyl-3-phenylpropylamine (tolterodine) from 3,4-dihydro-6-methyl-4-phenyl-2-benzopyran-2-one is characterized by intermediates such as 3-(2-hydroxy-5-methylphenyl)-3-phenylpropanol (I) and its sulfonated derivs. and amination in the presence of sodium iodide. Thus, treatment of I ditosylate with diisopropylamine and deoxygenation with t-BuOK in t-BuOH and deoxygenated deionized water afforded tolterodine, which was resolved as the (+)-tartrate.

IT 124937-52-6P
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
 (preparation of (hydroxymethylphenyl)diisopropylphenylpropylamine (tolterodine))

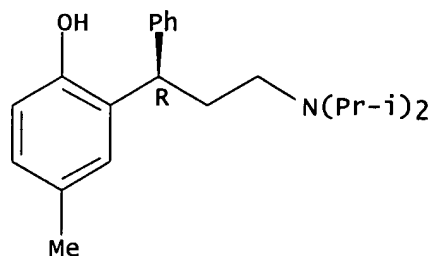
RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

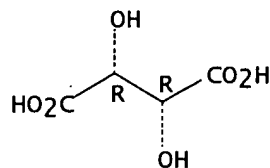
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 10 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2006:409059 CAPLUS
 DN 144:412229
 TI Process for preparing high-purity tolterodine
 IN Venkataraman, Sundaram; Mathad, Vijayavithal Thippannachar; Reddy, Kikkuru Srirami; Srinivasan, Neti; Reddy, Chinta Raveendra; Arunagiri, Muthulingam; Kumari, Routhu Lalitha
 PA India
 SO U.S. Pat. Appl. Publ., 9 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------|----------|-----------------|------------|
| PI | US 2006094904 | A1 | 20060504 | US 2005-259322 | 20051026 |
| | | | | US 2004-622829P | P 20041028 |

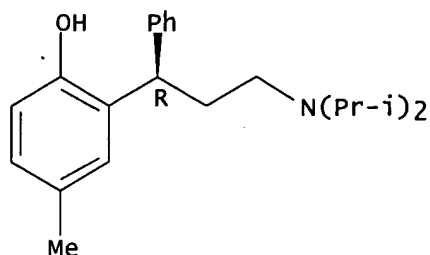
OS CASREACT 144:412229
 AB A process for the preparation of high-purity tolterodine comprises reacting Me 3-(2-benzyloxy-5-methylphenyl)-3-phenylpropionate with a reducing agent to form 3-(2-benzyloxy-5-methylphenyl)-3-phenylpropanol.
 IT 124937-52-6P, Tolterodine tartrate
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (in a process for preparing high-purity tolterodine)
 RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

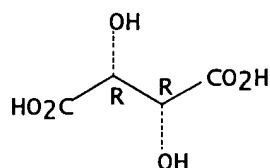


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 11 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:341629 CAPLUS

DN 144:390558

TI Process for the preparation of N,N-diisopropyl-3-(2-hydroxy-5-methylphenyl)-3-phenyl-propaneamine (i.e., racemic tolterodine)

IN Turchetta, Stefano; Ciambecchini, Umberto; Massardo, Pietro

PA Chemi SpA, Italy

SO U.S. Pat. Appl. Publ., 11 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------|----------|----------------------------------|------------------------|
| PI | US 2006079716 | A1 | 20060413 | US 2005-244396 IT 2004-MI1920 | 20051006 A 20041011 |

OS CASREACT 144:390558; MARPAT 144:390558

AB A process for the preparation of racemic tolterodine its pharmaceutically acceptable salts comprises: substitution of the sulfonyloxy group of the compound [I; R = C1-6 alkyl, CH2A, SiR23; A = (un)substituted aryl; R2 = (un)branched alkyl, (un)substituted aryl, acyl; and R1 = C1-6 alkyl, (un)substituted aryl] with N,N-diisopropylamine in a solvent comprising an ionic liquid to yield the tertiary amine (II); and optionally, salification with a pharmaceutically acceptable acid.

IT 124937-52-6P

RL: PNU (Preparation, unclassified); PREP (Preparation)
(preparation of)

RN 124937-52-6 CAPLUS

CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,

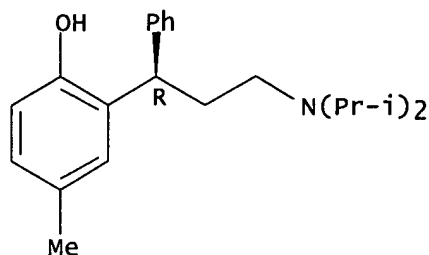
(2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

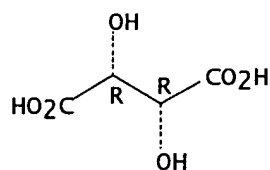


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 12 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:268720 CAPLUS

DN 144:318487

TI Biosynchronous transdermal drug delivery

IN DiPierro, Guy; Giannos, Steven

PA Chrono Therapeutics, Inc., USA

SO PCT Int. Appl., 85 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----|--|------|----------|-----------------|----------|
| PI | WO 2006031856 | A2 | 20060323 | WO 2005-US32672 | 20050913 |
| | WO 2006031856 | A3 | 20060817 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, | | | | |

CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM

US 2004-609418P P 20040913
US 2005-162517 A 20050913
US 2005-162525 20050913
US 2004-609418P P 20040913

AB A delivery mechanism and device for the passive periodic release of a drug or an active ingredient and the methods for synchronizing the administration of compds. with the human body's natural circadian rhythms and addiction rhythms. This strategy is intended to counteract disease states and symptoms when they are likely to be at their worst by using an automated and pre-programmable transdermal or other drug administration system.

IT 124937-52-6, Detrol
RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(biosynchronous transdermal drug delivery)

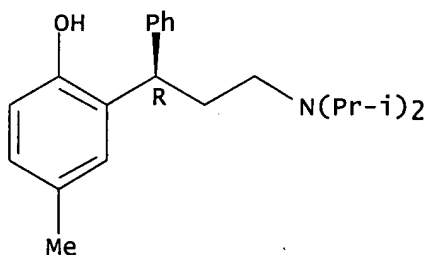
RN 124937-52-6 CAPLUS
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

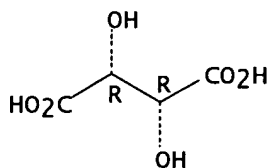


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 13 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:184347 CAPLUS

DN 144:260801

TI Sustained release pharmaceutical composition of tolterodine
 IN Kramar, Andrejka; Pisek, Robert; Rajer, Tadeja
 PA Krka, D.D., Novo Mesto, Slovenia
 SO Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DT Patent
 LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|----------|
| PI | EP 1629834 | A1 | 20060301 | EP 2004-20431 | 20040827 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR | | | | |
| | WO 2006021425 | A1 | 20060302 | WO 2005-EP9102 | 20050823 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |

EP 2004-20431 A 20040827

AB The present invention is directed to a sustained-release pharmaceutical composition comprising tolterodine, preferably tolterodine tartrate, to the use of said composition for the preparation of a medicament and to a method for producing such a sustained release pharmaceutical composition

IT 124937-52-6; Tolterodine tartrate

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(sustained-release pharmaceutical composition of tolterodine)

RN 124937-52-6 CAPLUS

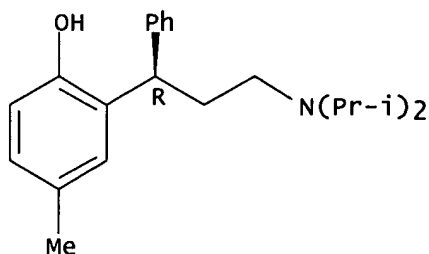
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

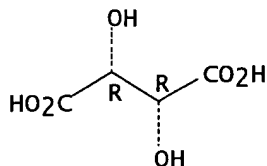
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 14 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:99736 CAPLUS
DN 144:184692
TI Use of compounds active on the sigma receptor for the treatment of
mechanical allodynia
IN Baeyens Cabrera, Jose Manuel
PA Laboratorios Del Dr. Esteve, S.A., Spain
SO PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| PI WO 2006010587 | A1 | 20060202 | WO 2005-EP8080 | 20050725 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | | | EP 2004-17561 | A 20040724 |
| | | | EP 2004-17562 | A 20040724 |
| | | | US 2004-902272 | A 20040730 |
| | | | US 2004-902273 | A 20040730 |
| | | | EP 2004-20376 | A 20040827 |
| US 2006019968 | A1 | 20060126 | US 2004-902272 | 20040730 |
| | | | EP 2004-17561 | A 20040724 |
| US 2006019969 | A1 | 20060126 | US 2004-902273 | 20040730 |
| | | | EP 2004-17562 | A 20040724 |

PATENT FAMILY INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|------------|
| PI US 2006019969 | A1 | 20060126 | US 2004-902273 | 20040730 |
| | | | EP 2004-17562 | A 20040724 |
| WO 2006010587 | A1 | 20060202 | WO 2005-EP8080 | 20050725 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, | | | | |

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
 LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
 NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,
 SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
 ZA, ZM, ZW
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
 IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
 CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
 GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM

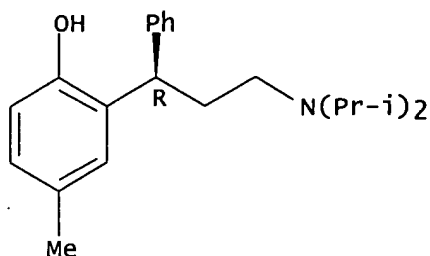
EP 2004-17561 A 20040724
 EP 2004-17562 A 20040724
 US 2004-902272 A 20040730
 US 2004-902273 A 20040730
 EP 2004-20376 A 20040827

FAN 2006:79246
 PATENT NO.

| | KIND | DATE | APPLICATION NO. | DATE |
|------------------|--|----------|-----------------|------------|
| PI US 2006019968 | A1 | 20060126 | US 2004-902272 | 20040730 |
| | | | EP 2004-17561 | A 20040724 |
| WO 2006010587 | A1 | 20060202 | WO 2005-EP8080 | 20050725 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| RW: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| | | | EP 2004-17561 | A 20040724 |
| | | | EP 2004-17562 | A 20040724 |
| | | | US 2004-902272 | A 20040730 |
| | | | US 2004-902273 | A 20040730 |
| | | | EP 2004-20376 | A 20040827 |

OS MARPAT 144:184692
 AB The invention discloses the use of compds. active on the sigma receptor for the treatment of mech. allodynia.
 IT 124937-52-6
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (sigma receptor modulators for treatment of mech. allodynia)
 RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)
 CM 1
 CRN 124937-51-5
 CMF C22 H31 N O

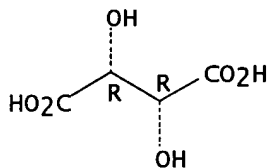
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 15 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2006:80185 CAPLUS
 DN 144:128739
 TI Method for preparation of tolterodine tartrate
 IN Zhao, Zhiquan
 PA Lunan Pharmaceutical Co., Ltd., Peop. Rep. China
 SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 11 pp.
 CODEN: CNXXEV
 DT Patent
 LA Chinese
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|------|----------|------------------|----------|
| PI | CN 1626504 | A | 20050615 | CN 2004-10058502 | 20040816 |
| | | | | CN 2004-10058502 | 20040816 |

OS CASREACT 144:128739

AB This invention pertains to a method for preparation of tolterodine tartrate by condensing trans-cinnamic alc. ester and p-methylphenol in the presence of acid such as inorg. acid of sulfuric acid, hydrochloric acid, nitric acid, phosphoric acid, hydrobromic acid, hydriodic acid or organic acid of formic acid, acetic acid, oxalic acid, benzoic acid, paratoluenesulfonic acid at 75-146° for 4-25 h, then coupling with diisopropylamine to form racemic tolterodine, optical resolution with L-(+)-tartrate to give L-(+)-tartrate-R-tolterodine and coproduct L-(+)-tartrate-S-tolterodine, removing L-(+)-tartrate by reacting with inorg. base, transferring S configuration to R, further saltifying R with L-(+)-tartrat to obtain L-(+)-tartrate-R-tolterodine. Trans-cinnamic alc. ester can be fluoroform sulfonic acid ester, fluoroform acetate, p-nitrobenzoate, 3,5-dinitrobenzoate or 2,4,6-trinitrobenzoate. Thus, 4-methylphenol, trans-cinnamic alc. 3,5-dinitrobenzoate and concentrated sulfuric acid mixed together and heated to 135-138°, stirred for 8 h, then cooled down

and neutralized with 10% sodium hydroxide, extracted with Et acetate, the organic phase washed with 5% potassium carbonate and dried with anhydrous sodium sulfate, after vacuum evaporated solvent and isopropanol recrystn. to give the product 3-(2-hydroxy-5-methylphenyl)-3-phenylpropyl-3,5-dinitrobenzoate with yield 82.8%.

IT 124937-52-6P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of optical tolterodine tartrate)

RN 124937-52-6 CAPLUS

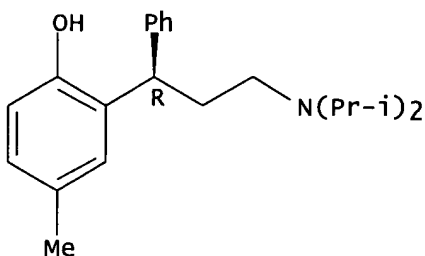
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

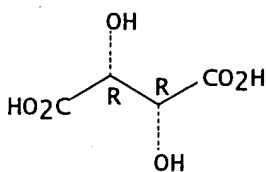


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 16 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:38921 CAPLUS

DN 144:177457

TI Manufacture of tolterodine tartrate dispersible tablet

IN Zhao, Zhiquan

PA Lunan Pharmaceutical Co., Ltd., Peop. Rep. China

SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 11 pp.

CODEN: CNXXEV

DT Patent

LA Chinese

FAN.CNT 1

PATENT NO.

KIND

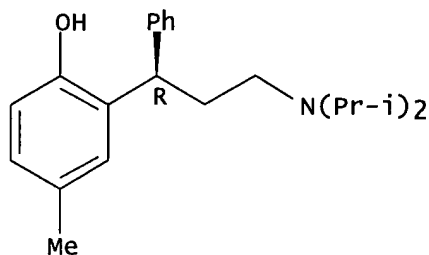
DATE

APPLICATION NO.

DATE

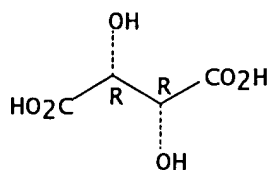
PI CN 1628646 A 20050622 CN 2004-10057363 20040830
 CN 2004-10057363 20040830
 AB The title dispersible tablet is composed of: tolterodine tartrate as active component, disintegrating agent, and auxiliary additive. This tablet can be used for treating urinary urgency, sychnuria, and urinary incontinence, and has the advantages of high dissoln. rate, high bioavailability, and less adverse effects.
 IT 124937-52-6, Tolterodine tartrate
 RL: PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (manufacture of tolterodine tartrate dispersible tablet)
 RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)
 CM 1
 CRN 124937-51-5
 CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).



CM 2
 CRN 87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 17 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2006:11150 CAPLUS
 DN 144:64351
 TI Co-administration of dehydroepiandrosterone (dhea) congener with pharmaceutically active agents for treating inflammation
 IN Patel, Dinesh; Vollmer, David; Daugherty, Claire; Gebhard, John
 PA Inflabloc Pharmaceuticals, Inc., USA
 SO U.S. Pat. Appl. Publ., 22 pp.
 CODEN: USXXCO
 DT Patent
 LA English

FAN.CNT 4

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|-------------|
| PI | US 2006004076 | A1 | 20060105 | US 2005-145024 | 20050603 |
| | | | | US 2004-584350P | P 20040630 |
| | WO 2006007312 | A2 | 20060119 | WO 2005-US20058 | 20050606 |
| | WO 2006007312 | A3 | 20060427 | | |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | | | | US 2004-584350P | P 20040630 |
| | | | | US 2005-145024 | A 20050603 |
| | US 2006122160 | A1 | 20060608 | US 2005-270326 | 20051108 |
| | | | | US 2004-584350P | P 20040630 |
| | | | | US 2005-145024 | A2 20050603 |
| | US 2006154908 | A1 | 20060713 | US 2006-342276 | 20060126 |
| | | | | US 2004-584350P | P 20040630 |
| | | | | US 2005-145024 | A2 20050603 |
| | US 2006217355 | A1 | 20060928 | US 2006-370218 | 20060306 |
| | | | | US 2004-584350P | P 20040630 |
| | | | | US 2005-145024 | A2 20050603 |

PATENT FAMILY INFORMATION:

FAN 2006:544792

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------|----------|-----------------|-------------|
| PI | US 2006122160 | A1 | 20060608 | US 2005-270326 | 20051108 |
| | | | | US 2004-584350P | P 20040630 |
| | | | | US 2005-145024 | A2 20050603 |
| | US 2006004076 | A1 | 20060105 | US 2005-145024 | 20050603 |
| | | | | US 2004-584350P | P 20040630 |

FAN 2006:677763

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------|----------|-----------------|-------------|
| PI | US 2006154908 | A1 | 20060713 | US 2006-342276 | 20060126 |
| | | | | US 2004-584350P | P 20040630 |
| | | | | US 2005-145024 | A2 20050603 |
| | US 2006004076 | A1 | 20060105 | US 2005-145024 | 20050603 |
| | | | | US 2004-584350P | P 20040630 |

FAN 2006:1012512

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------|----------|-----------------|-------------|
| PI | US 2006217355 | A1 | 20060928 | US 2006-370218 | 20060306 |
| | | | | US 2004-584350P | P 20040630 |
| | | | | US 2005-145024 | A2 20050603 |
| | US 2006004076 | A1 | 20060105 | US 2005-145024 | 20050603 |
| | | | | US 2004-584350P | P 20040630 |

AB The present invention is related to therapeutic uses of dehydroepiandrosterone (DHEA) congeners. More specifically, the present invention relates to the co-administration of a dehydroepiandrosterone (DHEA) congener in combination with at least one other pharmaceutically active agent to reduce inflammation.

IT 124937-52-6, Tolterodine tartrate

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(Co-administration of dehydroepiandrosterone (dhea) congener with pharmaceutically active agents for treating inflammation)

RN 124937-52-6 CAPLUS

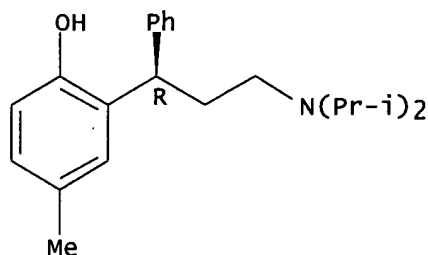
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

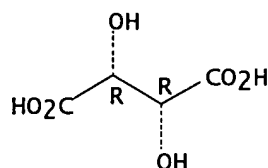


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 18 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:4736 CAPLUS

DN 144:247032

TI Characterization of muscarinic receptor binding and inhibition of salivation after oral administration of tolterodine in mice

AU Oki, Tomomi; Maruyama, Shuji; Takagi, Yukiko; Yamamura, Henry I.; Yamada, Shizuo

CS Department of Pharmacokinetics and Pharmacodynamics and COE Program in the 21st Century, School of Pharmaceutical Science, University of Shizuoka, Suruga-ku, Shizuoka, 422-8526, Japan

SO European Journal of Pharmacology (2006), 529(1-3), 157-163

CODEN: EJPHAZ; ISSN: 0014-2999

PB Elsevier B.V.

DT Journal

LA English

AB The current study was undertaken to characterize the effects of oral administration of tolterodine on muscarinic receptor binding in the bladder and submaxillary gland and on salivation in mice. In the in vitro

experiment, tolterodine and its metabolite (5-hydroxymethyl metabolite: 5-HM) competed concentration-dependently with [N-methyl-3H]-scopolamine ([3H]NMS) in the mouse bladder, submaxillary gland and heart, and the potencies of both agents were greater than that of oxybutynin. After oral administration of tolterodine (6.31, 21.0 $\mu\text{mol/kg}$) and oxybutynin (76.1 $\mu\text{mol/kg}$), there was a dose and time-dependent increase in K_d values for specific [3H]NMS binding in the bladder, prostate, submaxillary gland, heart, colon and lung, compared with control values, suggesting significant muscarinic receptor binding in each tissue. The K_d increase in each tissue by oral oxybutynin reached a maximum value of 0.5 h after oral administration and then rapidly declined, while that by tolterodine was greatest 2 h after the administration and it was maintained for at least 6 or 12 h, depending on the dose and on the tissue. Thus, muscarinic receptor binding of oral tolterodine was slower in onset and of a longer duration than that of oxybutynin. Also, oral oxybutynin showed relatively greater receptor binding in the submaxillary gland as compared with other tissues, but such high selectivity to the exocrine gland muscarinic receptors was not observed by oral tolterodine. Oral administration of tolterodine and oxybutynin reduced significantly the pilocarpine-induced salivary secretion in mice, and the attenuation of oral tolterodine appeared more slowly and it was more persistent than that of oral oxybutynin. The antagonistic effect of oral tolterodine on the dose-response curves to pilocarpine was significantly weaker than that of oxybutynin. These data suggest that oral tolterodine, compared with the case of oral oxybutynin, binds more selectively to muscarinic receptors in the mouse bladder than in the submaxillary gland, which may be advantageous in treating patients with overactive bladder.

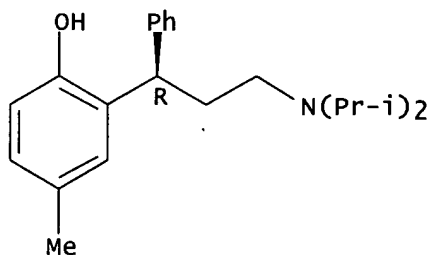
IT 124937-52-6, Tolterodine tartrate
 RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
 (characterization of muscarinic receptor binding and inhibition of salivation after oral administration of tolterodine in mice)

RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5
 CMF C22 H31 N O

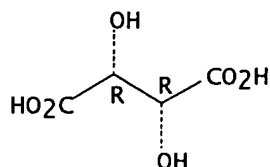
Absolute stereochemistry. Rotation (+).



CM 2

CRN '87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 19 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1220192 CAPLUS
DN 143:466219
TI Permeation enhancing compositions for anticholinergic agents containing urea compounds
IN Grenier, Arnaud; Carrara, Dario Norberto R.; Besse, Celine
PA Antares Pharma Ip1 A.-G., Switz.
SO PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

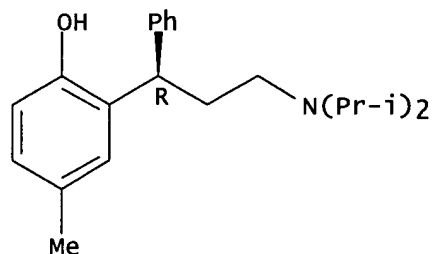
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2005107812 | A1 | 20051117 | WO 2005-EP4799 | 20050503 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 2005287194 | A1 | 20051229 | US 2004-568983P | P 20040507 |
| | | | US 2005-120306 | 20050502 |
| | | | US 2004-568983P | P 20040507 |

OS MARPAT 143:466219
AB A transdermal or topical composition including anticholinergic agents, such as oxybutynin, a urea-containing compound and a carrier system. A method is disclosed for treating a subject for urinary incontinence while reducing the incidences of peak concns. of drug and undesirable side effects. For example, gel containing oxybutynin 3, ethanol 50.72, diethylene glycol monoethyl ether 2.5, propylene glycol 15, urea 5, Kluce1 MF 2, butylhydroxytoluene 0.05%, was found to have a better pharmacokinetic and permeation character than the gel without urea.
IT 124937-52-6
RL: PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(transdermal and topical compns. containing anticholinergics and antispasmodic agents and urea compound for improved permeation)
RN 124937-52-6 CAPLUS
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5
CMF C22 H31 N O

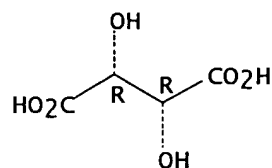
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 20 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1193308 CAPLUS
DN 143:466159
TI Controlled release mucoadhesive matrix formulation containing tolterodine
and a process for its preparation
IN Durga Maheswari, Parvataneni; Appalaswamy Naidu, Rongala; Podile,
Khadgpathi; Venkaiah Chowdary, Nannapaneni
PA Natco Pharma Limited, India
SO PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 2005105036 | A1 | 20051110 | WO 2005-IN99 | 20050404 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, | | | | |

EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG

IN 2004-CH393

A 20040428

AB Controlled release oral pharmaceutical mucoadhesive matrix formulation containing a therapeutically effective amount of tolterodine or its pharmaceutically acceptable salts, prodrugs and metabolites thereof dispersed in a rate controlling polymeric matrix comprising (1) a pH independent gelling polymer, such as polyethylene oxide, (2) pH dependent gelling polymer, such as sodium CM-cellulose (3) a film coating polymer component, such as Eudragit RS100 and other conventional tablet functional excipients. The formulation such as tablets or minitabets in capsules of the present invention relates to a 24 h controlled release dosage form useful for the treatment of urge incontinence and other symptoms of unstable or overactive urinary bladder. The invention also relates to a process for the preparation of controlled release mucoadhesive matrix formulation containing tolterodine in a tablet or mini tablets in capsule dosage form. For example, controlled-release mucoadhesive matrix tablets were prepared by wet granulation of tolterodine tartrate 2.0, polyethylene oxide-18 NF 7.0, sodium CM-cellulose 3.0, lactose anhydrous 20.0, microcryst. cellulose 51.8, polyvinylpyrrolidone K-30 5.0, Eudragit RS 100 10.0, iso-Pr alc. 72, and acetone 48, granules obtained were dried, lubricated with colloidal silica 0.1, talc 0.1, and magnesium stearate 1.0 mg, resp., and compressed into core tablets. Eudragit L 100-55 3.0 was added to a mixture of iso-Pr alc. 25.6 and acetone 37.8, followed by tri-Et citrate 0.5 mg, resp., and the solution obtained was used as a barrier coating for core tablets.

IT 124937-52-6, Tolterodine tartrate

RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation of controlled-release polymeric mucoadhesive matrix containing tolterodine for tablets or minitabets)

RN 124937-52-6 CAPLUS

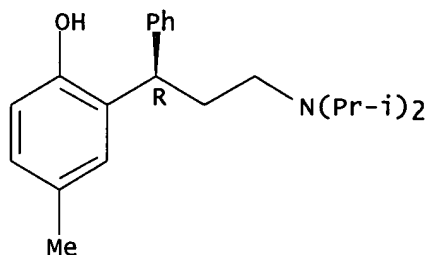
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

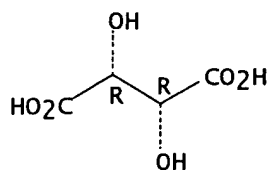


CM 2

CRN 87-69-4

CMF C4 H6 O6

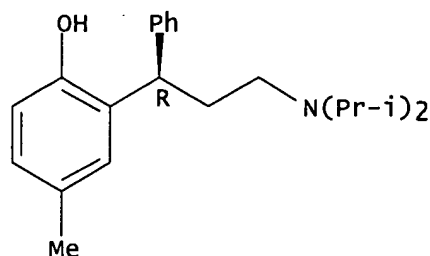
Absolute stereochemistry.



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 21 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1179331 CAPLUS
DN 143:393317
TI New spectrophotometric methods for the estimation of tolterodine tartrate in pharmaceutical formulations
AU Sankar, D. Gowri; Kumar, D. V. S. P.; Krishna, M. Vamsi; Latha, P. V. M.
CS Department of Pharmaceutical Science, Andhra University, Visakhapatnam, 530 003, India
SO Asian Journal of Chemistry (2005), 17(2), 1357-1359
CODEN: AJCHEW; ISSN: 0970-7077
PB Asian Journal of Chemistry
DT Journal
LA English
AB Two simple and sensitive visible spectrophotometric methods (methods A and B) were developed for the estimation of tolterodine tartrate in pure as well as in pharmaceutical formulations. Method A is based on the oxidative coupling reaction with 3-methyl-2-benzothiazolinone hydrazone (MBTH) in the presence of ceric ammonium sulfate (CAS) to form a colored species with λ_{max} at 555 nm. Method B is based on the oxidation of the drug with ferric chloride followed by complexation with 1,10-phenanthroline (1,10-PTL) to form a blood red colored chromogen with λ_{max} at 520 nm. Beer's law is obeyed in the range of 10-50 and 2.5- 12.5 $\mu\text{g/mL}$ for methods A and B resp. The results obtained are reproducible and statistically validated and also found to be suitable for the assay of tolterodine tartrate in bulk as well as in pharmaceutical formulations.
IT 124937-52-6, Tolterodine tartrate
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(spectrophotometric estimation of tolterodine tartrate in pharmaceutical formulations)
RN 124937-52-6 CAPLUS
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)
CM 1
CRN 124937-51-5
CMF C22 H31 N O

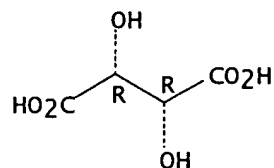
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 22 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:1171039 CAPLUS
 DN 143:411108
 TI Pharmaceutical compositions containing phosphodiesterase IV-inhibiting
 benzofuran derivative and anticholinergics
 IN Abe, Yuzuru; Yoshimatsu, Akiko; Miki, Ichiro
 PA Kyowa Hakko Kogyo Co., Ltd., Japan
 SO PCT Int. Appl., 39 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 FAN.CNT 1

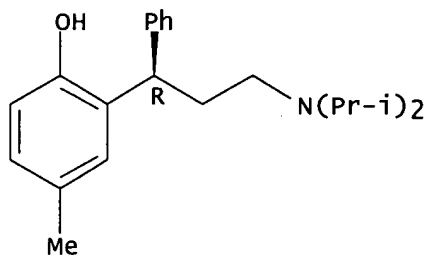
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 2005102344 | A1 | 20051103 | WO 2005-JP7966 | 20050427 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |

JP 2004-131880 A 20040427
 AB Disclosed is a pharmaceutical composition containing (a) 4-[(3,5-dichloro-4-pyridyl)carbamoyl]-7-methoxy-2-(4-methylpiperazine-1-ylcarbonyl)benzofuran(I) or a pharmacol. acceptable salt thereof and (b)

an anticholinergic agent. Also disclosed is such a pharmaceutical composition wherein the anticholinergic agent is a compound selected from the group consisting of tiotropium, ipratropium, oxitropium, tolterodine and oxybutynin, or a pharmacol. acceptable salt thereof. The compns. are effective for the treatment of chronic obstructive pulmonary disease and asthma. For example, a tablet was formulated containing I 20, tolterodine tartrate 2, lactose 143, starch 28, hydroxypropyl cellulose 6, and Mg stearate 1 mg/tablet.

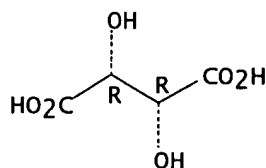
IT 124937-52-6, Tolterodine tartrate
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (pharmaceutical compns. containing phosphodiesterase IV-inhibiting benzofuran derivative and anticholinergics)
 RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)
 CM 1
 CRN 124937-51-5
 CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).



CM 2
 CRN 87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 23 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:1051779 CAPLUS
 DN 143:312243
 TI UV spectrophotometric determination of tolterodine tartrate and cefepime
 AU Sankar, D. Gowri; Krishna, M. Vamsi; Kumar, D. V. S. P.; Latha, P. V. M.
 CS Department of Pharmaceutical Sciences, Andhra University, Visakhapatnam, 530 003, India

SO Asian Journal of Chemistry (2005), 17(3), 2028-2030

CODEN: AJCHEW; ISSN: 0970-7077

PB Asian Journal of Chemistry

DT Journal

LA English

AB UV spectrophotometric methods were developed for the determination of tolterodine

tartrate and cefepime in pure and pharmaceutical formulations. These methods obey Beer's law limits in the concentration range of 10-90 and 5-40 µg/mL, exhibiting maximum absorption at 280 and 240 nm resp. These methods are extended to pharmaceutical preps. and there is no interference from any common pharmaceutical additives and diluents. The methods were statistically evaluated and are found to be precise and accurate.

IT 124937-52-6, Tolterodine tartrate

RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(UV spectrophotometric determination of tolterodine tartrate and cefepime)

RN 124937-52-6 CAPLUS

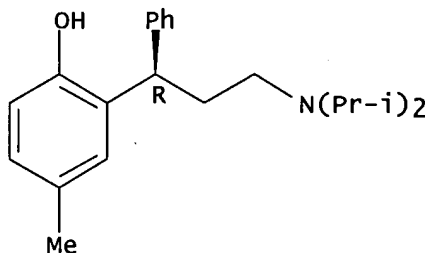
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

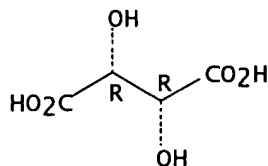


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.

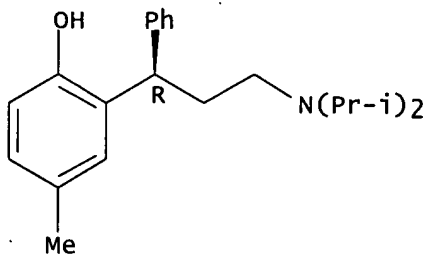


RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 24 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:978476 CAPLUS

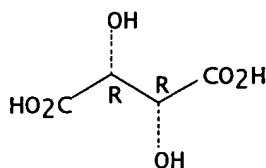
DN 143:259408
 TI High performance liquid chromatography-electrospray ionization mass spectrometric determination of tolterodine tartrate in human plasma
 AU Zhang, Beibei; Zhang, Zunjian; Tian, Yuan; Xu, Fengguo
 CS Center for Instrumental Analysis, China Pharmaceutical University, Jiangsu, 210009, Peop. Rep. China
 SO Journal of Chromatography, B: Analytical Technologies in the Biomedical and Life Sciences (2005), 824(1-2), 92-98
 CODEN: JCBAAI; ISSN: 1570-0232
 PB Elsevier B.V.
 DT Journal
 LA English
 AB A selective and sensitive high performance liquid chromatog.-electrospray ionization mass spectrometry (HPLC-ESIMS) method has been developed for the determination of tolterodine tartrate in human plasma. With oxybutynin as internal standard, tolterodine tartrate was extracted from plasma with n-hexane: isopropanol (95:5, volume/volume). The organic layer was evaporated and the residue was redissolved in mobile phase comprised of acetonitrile-water (10 mM CH₃COONH₄, pH 3.0) = 50:50 (volume/volume). An aliquot of 10 µl was chromatog. analyzed on a prepacked Shimadzu Shim-pack VP-ODS C18 column (150 mm + 2.0 mm I.D.) by means of selected-ion monitoring (SIM) mode mass spectrometry. Standard curves were linear (r = 0.9993) over the concentration range of 0.1-30.0 ng/mL and had good accuracy and precision. The within- and between-batch precisions were within 10% relative standard deviation. The limit of detection (LOD) was 0.05 ng/mL. The validated HPLC-ESIMS method has been used successfully to study tolterodine tartrate pharmacokinetic, bioavailability and bioequivalence in 20 healthy male volunteers.
 IT 124937-52-6, Tolterodine tartrate
 RL: ANT (Analyte); BSU (Biological study, unclassified); PKT (Pharmacokinetics); ANST (Analytical study); BIOL (Biological study) (tolterodine tartrate HPLC-ESIMS determination in human plasma)
 RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)
 CM 1
 CRN 124937-51-5
 CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).



CM 2
 CRN 87-69-4
 CMF C4 H6 O6

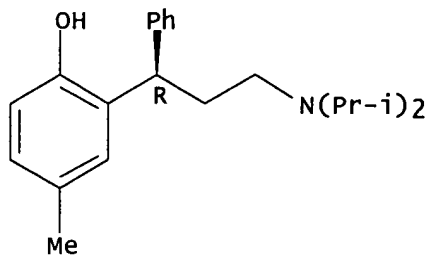
Absolute stereochemistry.



RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 25 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:970635 CAPLUS
DN 143:415557
TI Effect of the proton pump inhibitor omeprazole on the pharmacokinetics of extended-release formulations of oxybutynin and tolterodine
AU Dmochowski, Roger; Chen, Andrew; Sathyan, Gayatri; MacDiarmid, Scott; Gidwani, Shalini; Gupta, Suneel
CS Department of Urology, Vanderbilt University School of Medicine, Nashville, TN, USA
SO Journal of Clinical Pharmacology (2005), 45(8), 961-968
CODEN: JCPCBR; ISSN: 0091-2700
PB Sage Publications
DT Journal
LA English
AB This study assessed the effect of the proton pump inhibitor omeprazole on the bioavailability of the extended-release formulations of oxybutynin and tolterodine. Forty-four healthy volunteers received each of 4 treatments in a 4-period crossover design. The treatments consisted of osmotically controlled extended-release oxybutynin chloride tablets at 10 mg/d or extended-release tolterodine tartrate capsules at 4 mg/d, with and without preceding treatment with 20 mg omeprazole daily for 4 days. Blood samples collected predose and at scheduled time points for 36 h postdose were analyzed for oxybutynin and its active metabolite, N-desethyloxybutynin, or tolterodine and its active 5-hydroxymethyl metabolite, as appropriate. The AUC_∞ ratios for oxybutynin and its metabolite with and without prior omeprazole fell within the 80% to 125% range (accepted as the criterion for bioequivalence), as did those for tolterodine and its active moiety. The peak concentration ratios for oxybutynin and metabolite also conformed to this range; those for tolterodine did not. Increasing gastric pH with omeprazole does not substantially alter the pharmacokinetic properties of extended-release oxybutynin but may alter those of extended-release tolterodine.
IT 124937-52-6, Tolterodine tartrate
RL: PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmacokinetic properties were altered for extended release tolterodine proton pump inhibitor omeprazole with greater C_{max} in human)
RN 124937-52-6 CAPLUS
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)
CM 1
CRN 124937-51-5
CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

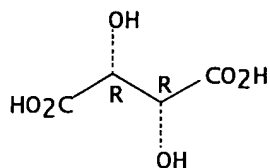


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 26 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:638702 CAPLUS

DN 143:139193

TI Novel pharmaceutical compositions

IN Gupta, Vinod Kumar; Vaya, Navin

PA Torrent Pharmaceuticals Limited, India

SO PCT Int. Appl., 37 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----|--|------|----------|-----------------|----------|
| PI | WO 2005065639 | A2 | 20050721 | WO 2004-IN321 | 20041018 |
| | WO 2005065639 | A3 | 20050901 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |

IN 2003-MU1201

A 20031121

AB A dosage form comprising of an active ingredient as modified release and an active ingredient as immediate release. wherein the modified release

active ingredient is selected from high dose, low solubility active ingredients or low dose, low solubility active ingredients or low dose, high solubility active ingredients and the immediate release active ingredient is selected from low dose active ingredients. Thus, tablets were obtained from

nebivolol-HCl 6.1, lactose monohydrate 78.5, red ferric oxide 0.6, and PVP K30 3.3%.

IT 124937-52-6, Tolterodinetartrate

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (pharmaceutical comps.)

RN 124937-52-6 CAPLUS

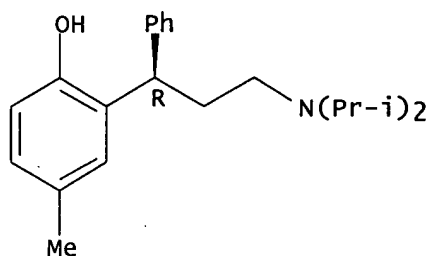
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

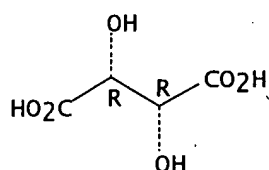


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 27 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:588860 CAPLUS

DN 143:115342

TI A preparation of tolterodine and its salts with improved purity, useful as anticholinergic agent

IN Kankan, Rajendra Narayanrao; Rao, Dharmaraj Ramachandra

PA Cipla Limited, India; Wain, Christopher Paul

SO PCT Int. Appl., 32 pp.

CODEN: PIXXD2

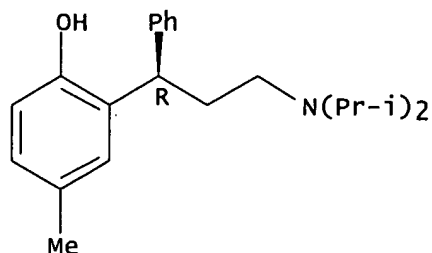
DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----|---|------|----------|-----------------|------------|
| PI | WO 2005061432 | A1 | 20050707 | WO 2004-GB5420 | 20041223 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | GB 2003-30056 | A 20031224 |
| | | | | GB 2004-23300 | A 20041020 |
| | CA 2551501 | AA | 20050707 | CA 2004-2551501 | 20041223 |
| | | | | GB 2003-30056 | A 20031224 |
| | | | | GB 2004-23300 | A 20041020 |
| | | | | WO 2004-GB5420 | W 20041223 |
| | EP 1701932 | A1 | 20060920 | EP 2004-820622 | 20041223 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS | | | | |
| | | | | GB 2003-30056 | A 20031224 |
| | | | | GB 2004-23300 | A 20041020 |
| | | | | WO 2004-GB5420 | W 20041223 |
| OS | CASREACT 143:115342 | | | | |
| AB | The invention relates to a preparation of (+)-tolterodine (I) and its salts with improved purity, useful as anticholinergic agent (no data). Tartrate of I was prepared via amination of the prepared sulfonic acid ester II by diisopropylamine, hydrolysis, purification, and salt formation. Dimeric impurity associated with tolterodine tartrate was measured (< 0.1%). | | | | |
| IT | 124937-52-6P, Tolterodine tartrate RL: IMF (Industrial manufacture); PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation) (preparation of tolterodine and its salts with improved purity useful as anticholinergic agent) | | | | |
| RN | 124937-52-6 CAPLUS | | | | |
| CN | Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME) | | | | |
| CM | 1 | | | | |
| CRN | 124937-51-5 | | | | |
| CMF | C22 H31 N O | | | | |

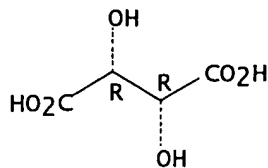
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 28 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:588858 CAPLUS
DN 143:115346
TI Improved process for the industrial preparation of tolterodine via
reductive amination of an aldehyde intermediate
IN Pascual Coca, Gustavo; Martin Pascual, Pablo; Martin Juarez, Jorge
PA Ragactives, S.L., Spain
SO PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DT Patent
LA Spanish
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| PI WO 2005061431 | A1 | 20050707 | WO 2004-ES572 | 20041221 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| ES 2235648 | A1 | 20050701 | ES 2003-3032 | A 20031222 |
| CA 2550477 | AA | 20050707 | ES 2003-3032 | 20031222 |
| | | | CA 2004-2550477 | 20041221 |
| | | | ES 2003-3032 | A 20031222 |
| | | | WO 2004-ES572 | W 20041221 |
| EP 1698615 | A1 | 20060906 | EP 2004-805115 | 20041221 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS | | | | |
| | | | ES 2003-3032 | A 20031222 |
| | | | WO 2004-ES572 | W 20041221 |

OS CASREACT 143:115346; MARPAT 143:115346
AB The invention relates to a method of obtaining tolterodine (I). The inventive method consists in: (1) reacting an aldehyde II (R = protective group for hydroxyl) with HN(Pr-iso)₂ in the presence of a reducing agent; (2) optionally converting the resulting amine intermediate III into a salt, and, if desired, isolating it; (3) removing the hydroxyl protective group to give I; and (4) if desired, separating the desired (R) or (S) enantiomer (or their mixture), and/or converting the compound thus obtained

into a pharmaceutically acceptable salt. I is a known muscarinic receptor antagonist (no data) which can be used in the treatment of urinary incontinence and other symptoms of urinary bladder hyperactivity. The new process is designed to be more economical, to use less dangerous reagents, to give better quality product, and to be more productive than known methods, thereby making it more suitable for use on an industrial scale. For instance, Friedel-Crafts acylation of 4-MeC₆H₄OMe by PhCOCl using SnCl₄ gave 78% 2-methoxy-5-methylbenzophenone. Reduction of this ketone using 2 equiv NaBH₄ and BF₃.THF gave 93% of the corresponding diphenylmethane derivative, which was lithiated with BuLi and ethoxylated with ethylene oxide to give 3-(2-methoxy-5-methylphenyl)-3-phenylpropan-1-ol. Oxidation of this alc. by 4 different oxidizing agents gave II (R = Me); in particular, Swern oxidation with DMSO and oxalyl chloride gave 94% yield. Reductive amination of II (R = Me) with NaBH(OAc)₃ and HN(Pr-iso)₂ gave 91% III (R = Me), which was treated with HBr in refluxing AcOH to give 64% I.HBr. Addition of the phase-transfer catalyst Bu₄N⁺Br⁻ to the latter demethylation reaction increased the yield to 80%. Alternatively, III (R = Me) was isolated as the HBr salt before demethylation, and was thereby obtained as a crystalline product which was free of impurities. Finally, I.HBr was converted to the (R)-(+)-isomer L-tartrate salt, which was obtained with a purity of 99.80%.

IT 124937-52-6P, (R)-Tolterodine (L)-tartrate
 RL: IMF (Industrial manufacture); PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation)
 (improved preparation of tolterodine via reductive amination of an aldehyde intermediate)

RN 124937-52-6 CAPLUS

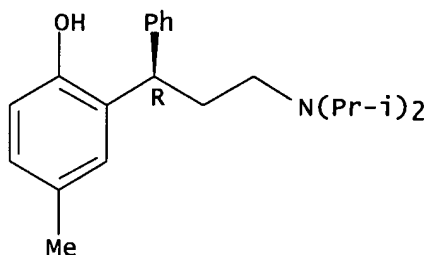
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

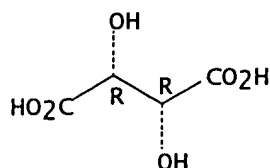


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 29 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:555075 CAPLUS

DN 143:359890

TI Extended-release formulations of oxybutynin and tolterodine exhibit similar central nervous system tolerability profiles: A subanalysis of data from the OPERA trial

AU Chu, Franklin M.; Dmochowski, Roger R.; Lama, Daniel J.; Anderson, Rodney U.; Sand, Peter K.

CS San Bernardino Urological Associates, San Bernardino, CA, USA

SO American Journal of Obstetrics and Gynecology (2005), 192(6), 1849-1854
CODEN: AJOGAH; ISSN: 0002-9378

PB Elsevier

DT Journal

LA English

AB Objective: This study was undertaken to compare the central nervous system (CNS) tolerability profiles of the extended-release formulations of oxybutynin chloride and tolterodine tartrate in the treatment of women with overactive bladder (OAB), as observed in the OPERA (Overactive bladder: Performance of Extended Release Agents) trial. Study design: The OPERA trial was a randomized, double-blind, active-control comparison of the efficacy and safety of extended-release oxybutynin (10 mg/d) and extended-release tolterodine (4 mg/d) given to 790 women with OAB for 12 wk. The incidence of reported CNS events was compared between the treatment groups by using the Fisher exact test. Results: The incidence of CNS adverse events was 9% and 8% for the oxybutynin and tolterodine treatment groups, resp. The difference between groups was not statistically significant. All reported CNS adverse events were rated as mild or moderate in severity. There were no serious treatment-related adverse events in either group, and discontinuation because of a CNS adverse event was infrequent. Conclusion: The extended-release formulations of oxybutynin and tolterodine were observed to be associated with

a similar low incidence of CNS adverse events, which were mostly mild or moderate in severity.

IT 124937-52-6, Tolterodine tartrate

RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (extended release formulation of tolterodine tartrate with CNS adverse event like somnolence, hypertonia and tremor and vertigo had tolerability similar to that of oxybutynin chloride in female patient with overactive bladder)

RN 124937-52-6 CAPLUS

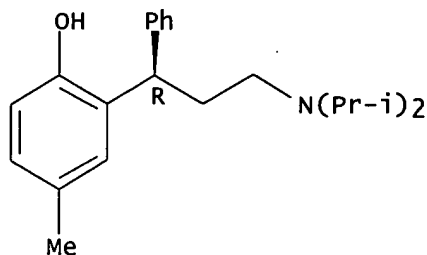
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

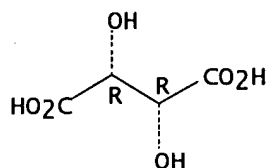
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L11 ANSWER 30 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:500489 CAPLUS
DN 143:373118
TI Tolterodine tartrate sustained-release tablets
AU Liu, Zhenghe; Zhang, Junshou; Cao, Deshan
CS Nanjing Meirui-pharma Co., LTD., Nanjing, Jiangsu Province, 210038, Peop.
Rep. China
SO Zhongguo Shenghua Yaowu Zazhi (2004), 25(4), 230-232
CODEN: ZSYZFP; ISSN: 1005-1678
PB Zhongguo Shenghua Yaowu Zazhi Bianjibu
DT Journal
LA Chinese
AB Tolterodine tartrate sustained-release tablets were prepared, and the content of tolterodine tartrate was determined by high performance liquid chromatog. (HPLC). Orthogonal design was employed to establish the relationship between the match-ratio of hydroxypropyl methylcellulose (HPMC) to polyvinylpyrrolidone (PVP) and the release rate in vitro. The optimal formulation of tolterodine tartrate sustained-release tablets was as follows: tolterodine tartrate 4 g, HPMC 20 g, mannitol 20 g, dextrin 75 g, 20% PVP and magnesium stearate 2 g. The accumulated release amount of tolterodine tartrate sustained-release tablets was more than 75% within 8 h. HPMC and PVP manufactured by domestic companies can be used properly as barriers to prepare matrix sustained-release tablets of tolterodine tartrate. The formulation and technique are feasible in industry.
IT 124937-52-6, Tolterodine tartrate
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tolterodine tartrate sustained-release tablets)
RN 124937-52-6 CAPLUS

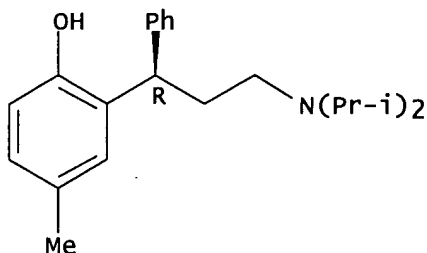
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
(2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

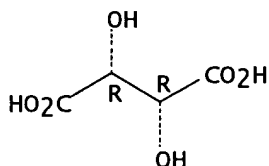


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 31 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:493508 CAPLUS

DN 143:20045

TI Use of (+)-isopropyl 2-methoxyethyl 4-(2-chloro-3-cyanophenyl)-1,4-dihydro-
2,6-dimethylpyridine-3,5-dicarboxylate for the treatment of memory
disorders

IN Unterbeck, Axel; De Vivo, Michael; Rose, Gregory M.

PA Memory Pharmaceuticals Corporation, USA

SO PCT Int. Appl., 18 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|--|----------|-----------------|----------|
| PI | WO 2005051389 | A1 | 20050609 | WO 2004-US38624 | 20041119 |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| | RW: | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, | | | |

AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

| | | | | | |
|---|----|----------|-----------------|---|----------|
| | | | US 2003-523664P | P | 20031121 |
| | | | US 2004-608116P | P | 20040909 |
| AU 2004292967 | A2 | 20050609 | AU 2004-292967 | | 20041119 |
| AU 2004292967 | A1 | 20050609 | | | |
| | | | US 2003-523664P | P | 20031121 |
| | | | US 2004-608116P | P | 20040909 |
| | | | WO 2004-US38624 | W | 20041119 |
| CA 2546366 | AA | 20050609 | CA 2004-2546366 | | 20041119 |
| | | | US 2003-523664P | P | 20031121 |
| | | | US 2004-608116P | P | 20040909 |
| | | | WO 2004-US38624 | W | 20041119 |
| US 2005153953 | A1 | 20050714 | US 2004-992464 | | 20041119 |
| | | | US 2003-523664P | P | 20031121 |
| | | | US 2004-608116P | P | 20040909 |
| EP 1684755 | A1 | 20060802 | EP 2004-811352 | | 20041119 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS | | | | | |
| | | | US 2003-523664P | P | 20031121 |
| | | | US 2004-608116P | P | 20040909 |
| | | | WO 2004-US38624 | W | 20041119 |

PATENT FAMILY INFORMATION:

FAN 2005:493523

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|----------|-----------------|-----------------|------------|
| PI | WO 2005051426 | A1 | 20050609 | WO 2004-US38623 | 20041119 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | US 2003-523664P | P 20031121 |
| | | | | US 2004-608116P | P 20040909 |
| AU 2004292966 | A1 | 20050609 | AU 2004-292966 | | 20041119 |
| | | | US 2003-523664P | P | 20031121 |
| | | | US 2004-608116P | P | 20040909 |
| | | | WO 2004-US38623 | W | 20041119 |
| CA 2546395 | AA | 20050609 | CA 2004-2546395 | | 20041119 |
| | | | US 2003-523664P | P | 20031121 |
| | | | US 2004-608116P | P | 20040909 |
| | | | WO 2004-US38623 | W | 20041119 |
| US 2005153953 | A1 | 20050714 | US 2004-992464 | | 20041119 |
| | | | US 2003-523664P | P | 20031121 |
| | | | US 2004-608116P | P | 20040909 |
| EP 1684806 | A1 | 20060802 | EP 2004-811351 | | 20041119 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS | | | | | |
| | | | US 2003-523664P | P | 20031121 |
| | | | US 2004-608116P | P | 20040909 |
| | | | WO 2004-US38623 | W | 20041119 |

AB The invention discloses methods for treatment of memory disorders using (+)-iso-Pr 2-methoxyethyl 4-(2-chloro-3-cyanophenyl)-1,4-dihydro-2,6-

dimethylpyridine-3,5-dicarboxylate, as a sole active agent or in combination with other pharmacol. agents.

IT 124937-52-6, Detrol
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 ((+)-iso-Pr 2-methoxyethyl 4-(2-chloro-3-cyanophenyl)-1,4-dihydro-2,6-dimethylpyridine-3,5-dicarboxylate for treatment of memory disorders)

RN 124937-52-6 CAPLUS

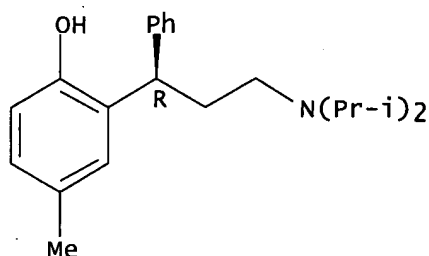
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

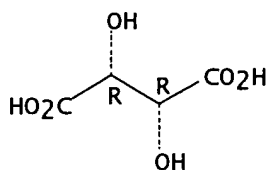


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 32 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:380709 CAPLUS

DN 143:77978

TI Rhodium-Catalyzed Asymmetric 1,4-Addition of Arylboronic Acids to Coumarins: Asymmetric Synthesis of (R)-Tolterodine

AU Chen, Gang; Tokunaga, Norihito; Hayashi, Tamio

CS Department of Chemistry, Graduate School of Science, Kyoto University, Kyoto, 606-8502, Japan

SO Organic Letters (2005), 7(11), 2285-2288
 CODEN: ORLEF7; ISSN: 1523-7060

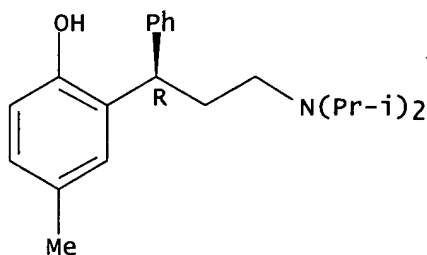
PB American Chemical Society

DT Journal

LA English

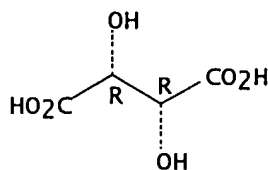
OS CASREACT 143:77978
 AB Rhodium-catalyzed asym. 1,4-addition of arylboronic acids $R_1B(OH)_2$ ($R_1 = Ph$, 4-MeC₆H₄, 3-MeC₆H₄, 4-ClC₆H₄, 4-MeOC₆H₄) to coumarins I ($R = 6-Me$, H, 6-MeO₂C, 8-MeO) proceeded with high enantioselectivity in the presence of a rhodium catalyst (3 mol %) generated from $Rh(acac)(C_2H_4)_2$ and (R)-Segphos to give the corresponding (R)-4-arylchroman-2-ones II in over 99% ee. This asym. reaction was applied to the synthesis of (R)-tolterodine.
 IT 124937-52-6P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (rhodium-catalyzed asym. 1,4-addition of arylboronic acids to coumarins and application to asym. synthesis of (R)-tolterodine)
 RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)
 CM 1
 CRN 124937-51-5
 CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).



CM 2
 CRN 87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 33 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:358491 CAPLUS
 DN 143:61722
 TI An Improved, Scalable, and Impurity-Free Process for Tolterodine Tartrate
 AU Srinivas, Keesari; Srinivasan, Neti; Reddy, Kikkuru Srirami; Ramakrishna, Muddasani; Reddy, Chinta Raveendra; Arunagiri, Muthulingam; Kumari, Routhu Lalitha; Venkataraman, Sundaram; Mathad, Vijayavithal T.
 CS Department of Research and Development, Integrated Product Development,

Dr. Reddy's Laboratories Ltd., Bollaram, Jinnaram, Medak District,
502-325, India

SO Organic Process Research & Development (2005), 9(3), 314-318
CODEN: OPRDFK; ISSN: 1083-6160

PB American Chemical Society

DT Journal

LA English

OS CASREACT 143:61722

AB Tolterodine tartrate is an anticholinergic muscle relaxant used to treat urinary frequency, urinary urgency, and incontinence. An improved, cost-effective, and impurity-free process for tolterodine tartrate suitable for large-scale com. production is described with focus on various scale-up and impurity issues.

IT 124937-52-6P, Tolterodine tartrate
RL: IMF (Industrial manufacture); PUR (Purification or recovery); PREP (Preparation)
(improved and scalable and impurity-free process for preparation of tolterodine tartrate)

RN 124937-52-6 CAPLUS

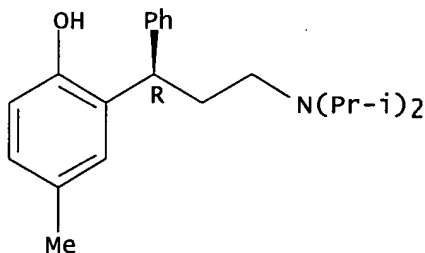
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

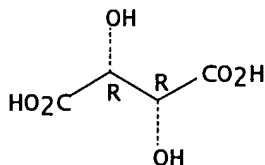


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.

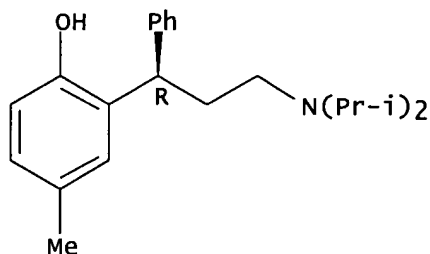


RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 34 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:185350 CAPLUS

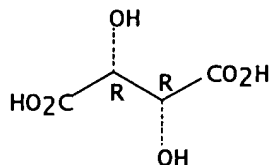
DN 143:106714
 TI Tolterodinium (+)-(2R,3R)-hydrogen tartrate
 AU Kosutic-Hulita, Nada; Zegarac, Miroslav
 CS Prilaz baruna Filipovica 29, PLIVA Research and Development Ltd, Zagreb, HR-10000, Croatia
 SO Acta Crystallographica, Section C: Crystal Structure Communications (2005), C61(3), o171-o173
 CODEN: ACSCEE; ISSN: 0108-2701
 PB Blackwell Publishing Ltd.
 DT Journal
 LA English
 AB In the crystal structure of (R)-N,N-diisopropyl-3-(2-hydroxy-5-methylphenyl)-3-phenylpropylaminium (2R,3R)-H tartrate, C₂₂H₃₂N⁺·C₄H₅O₆⁻, the H tartrate anions are linked by O-H...O H bonds to form helical chains built from R₂₂(9) rings. These chains are linked by the tolterodine mols. via N-H...O and O-H...O H bonds to form sep. sheets parallel to the (101) plane. Crystallog. data are given.
 IT 124937-52-6, Tolterodinium (+)-(2R,3R)-hydrogen tartrate (1:1)
 RL: PRP (Properties)
 (crystal structure of)
 RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)
 CM 1
 CRN 124937-51-5
 CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).



CM 2
 CRN 87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 35 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:71091 CAPLUS

DN 142:162623

TI Medicinal compositions containing tricyclic heterocyclic compound and anticholinergic agent

IN Yamagata, Tsuyoshi; Shirakura, Shiro

PA Kyowa Hakko Kogyo Co., Ltd., Japan

SO PCT Int. Appl., 31 pp.

CODEN: PIXXD2

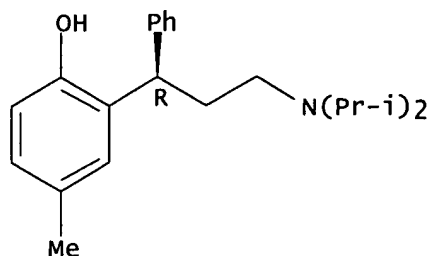
DT Patent

LA Japanese

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
|-----|--|------|----------|--|------------|--|
| PI | WO 2005007191 | A1 | 20050127 | WO 2004-JP10521 | 20040716 | |
| | W: | | | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | |
| | RW: | | | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | |
| | CA 2532805 | AA | 20050127 | JP 2003-197662 | A 20030716 | |
| | | | | CA 2004-2532805 | 20040716 | |
| | | | | JP 2003-197662 | A 20030716 | |
| | | | | WO 2004-JP10521 | W 20040716 | |
| | EP 1652532 | A1 | 20060503 | EP 2004-747885 | 20040716 | |
| | R: | | | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK | | |
| | | | | JP 2003-197662 | A 20030716 | |
| | | | | WO 2004-JP10521 | W 20040716 | |
| | US 2006160887 | A1 | 20060720 | US 2005-562635 | 20051229 | |
| | | | | JP 2003-197662 | A 20030716 | |
| | | | | WO 2004-JP10521 | W 20040716 | |
| AB | It is intended to provide a medicinal composition useful in treating, for example, hyperactive bladder which comprises 3,3,3-trifluoro-2-hydroxy-2-methyl-N-(5,5,10-trioxo-4,10-dihydrothieno[3,2-c][1]benzothiepin-9-yl)propanamide or a pharmacol. acceptable salt thereof and an anticholine drug. The effect of combination of (S)-(+)-3,3,3-trifluoro-2-hydroxy-2-methyl-N-(5,5,10-trioxo-4,10-dihydrothieno[3,2-c][1]benzothiepin-9-yl)propanamide 0.01 and tolterodine 3 mg/kg on bladder contraction in spinal cord injury rats was examined | | | | | |
| IT | 124937-52-6 | | | RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (medicinal compns. containing tricyclic heterocyclic compound and anticholinergic agent) | | |
| RN | 124937-52-6 | | | CAPLUS | | |
| CN | Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME) | | | | | |
| CM | 1 | | | | | |
| CRN | 124937-51-5 | | | | | |
| CMF | C22 H31 N O | | | | | |

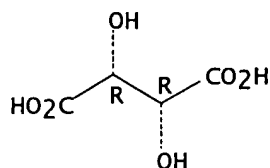
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 36 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:57118 CAPLUS

DN 142:141276

TI Oxygen-containing heterocycles as PDE IV inhibitors, pharmaceutical compositions containing them and anticholinergic agents, uses of the compositions for treatment of COPD or asthma, and pharmaceutical kits containing both components

IN Abe, Yuzuru; Miki, Ichiro

PA Kyowa Hakko Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

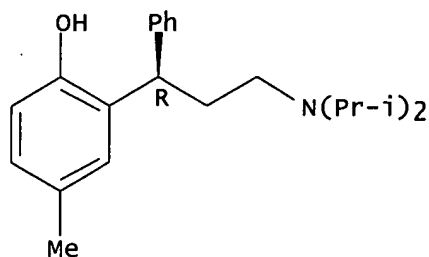
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------|----------|-----------------|----------|
| PI | JP 2005015394 | A2 | 20050120 | JP 2003-182385 | 20030626 |
| | | | | JP 2003-182385 | 20030626 |

OS MARPAT 142:141276

AB The comps. contain (a) O-containing benzoheterocycles I [m = 0-4; R1-R4 = H, lower alkyl, cycloalkyl, lower alkenyl, cycloalkenyl, aryl, aralkyl; 2 of R1-R4 on the same C are bonded together to form a spiro ring; adjacent 2 of R1-R4 may be bonded together to form a condensed ring or form a double bond; R5 = lower (halo)alkoxy; R6 = H, halo; Y = Q; R7 = cyano, ethynyl, carbamoyl; R8 = H, 4-carboxyphenyl; R7 and R8 may be bonded together to form a double bond] or their pharmacol. acceptable salts and (b) anticholinergic agents. COPD or asthma is treated by administering (a) and (b) simultaneously or sep. with some time interval. Thus, tablets were formulated containing cis-4-cyano-4-(8-methoxy-1,4-benzodioxan-5-yl)cyclohexanecarboxylic acid and oxybutynin hydrochloride.

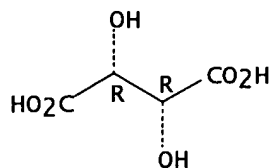
IT 124937-52-6, Tolterodine tartrate
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (pharmaceutical compns. containing O-containing heterocycles as PDE IV
 inhibitors and anticholinergic agents for treatment of COPD or asthma)
 RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
 (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)
 CM 1
 CRN 124937-51-5
 CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).



CM 2
 CRN 87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 37 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:55181 CAPLUS
 DN 142:134324
 TI Enantioselective synthesis of enantiomerically enriched compounds
 IN Piccolo, Oreste; Ulgheri, Fausta; Marchetti, Mauro
 PA Consiglio Nazionale Delle Ricerche, Italy
 SO PCT Int. Appl., 20 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|--|------|----------|-----------------|----------|
| PI | WO 2005005356 | A2 | 20050120 | WO 2004-EP7193 | 20040701 |
| | WO 2005005356 | A3 | 20050317 | | |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, | | | | |

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1644311 A2 20060412 IT 2003-MI1354 A 20030702
 EP 2004-763070 20040701
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
 IT 2003-MI1354 A 20030702
 WO 2004-EP7193 W 20040701

OS CASREACT 142:134324; MARPAT 142:134324

AB A process for the enantioselective hydrogenation of formula I [w = CH₂, CO; X = OH, alkoxy, benzyloxy, etc.; Z = OH, alkoxy, benzyloxy with provisos] was disclosed. For example, compound II was enantioselectively reduced in the presence of [Rh(COD)Cl]₂ and (S,S)-chiraphos to provide III in 84% and >99% e.e., which was subsequently converted to (S)-tolterodine. Of note, this transformation is claimed in the presence of a catalyst or its suitable precursor based on Rh, Ru or Ir, having an oxidation state of 0, +1 or +2, and containing at least one enantiomerically enriched chiral ligand.

IT 124937-52-6P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (enantioselective synthesis of enantiomerically enriched compds.)

RN 124937-52-6 CAPLUS

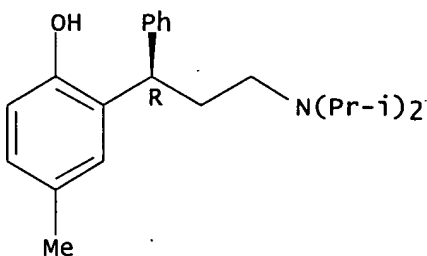
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

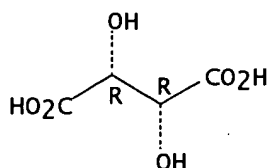


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 38 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:41309 CAPLUS

DN 142:463446

TI Process for preparing N,N-diisopropyl-3-(2-hydroxy-5-methylphenyl)-3-phenylpropylamine in racemic or optically active form thereof

IN Lustig, Petr; Hejtmankova, Ludmila; Ridvan, Ludek; Hruby, Petr; Kuchar, Miroslav; Klouckova, Iveta; Sisteck, Vaclav

PA Zentiva, A.S., Czech Rep.

SO Czech Rep., 11 pp.

CODEN: CZXXED

DT Patent

LA Czech

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|------|----------|------------------------------|----------------------|
| PI | CZ 293791 | B6 | 20040714 | CZ 2003-1571 CZ 2003-1571 | 20030605 20030605 |

OS CASREACT 142:463446

AB The present invention relates to a process for preparing N,N-diisopropyl-3-(2-hydroxy-5-methylphenyl)-3-phenylpropylamine I (also known as tolterodine) in racemic or optically active form thereof, comprising (a) O-dealkylation and cyclization of the acid II [R1 = alkyl, CH2Ph], (b) reduction of the resulting 3,4-dihydro-6-methyl-4-phenyl-2H-benzopyran-2-one III, (c) reaction of IV with sulfonic acid derivative (e.g., p-toluenesulfonyl chloride), reacting V [X = toluenesulfonyl, methanesulfonyl, camphor-10-sulfonyl] with diisopropylamine, and hydrolysis of VI [X is defined as above] to afford I. Thus, reduction of rac-3,4-dihydro-6-methyl-4-phenyl-2H-benzopyran-2-one (rac-III) with Red-A1, followed by reacting the resulting rac-IV with p-toluenesulfonyl chloride, reacting rac-V [X = p-toluenesulfonyl] with diisopropylamine, and hydrolysis of rac-VI with NaOH afforded rac-I.

IT 124937-52-6P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(process for preparing N,N-diisopropyl-3-(2-hydroxy-5-methylphenyl)-3-phenylpropylamine in racemic or optically active form thereof)

RN 124937-52-6 CAPLUS

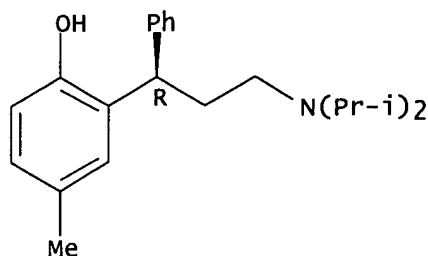
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

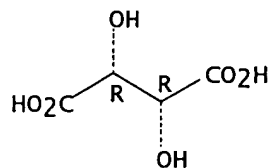
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 39 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:37484 CAPLUS
DN 142:309151
TI Effect of antacid on the pharmacokinetics of extended-release formulations of tolterodine and oxybutynin
AU Sathyan, Gayatri; Dmochowski, Roger R.; Appell, Rodney A.; Guo, Cindy; Gupta, Suneel K.
CS Department of Clinical Pharmacology, ALZA Corporation, Mountain View, CA, USA
SO Clinical Pharmacokinetics (2004), 43(14), 1059-1068
CODEN: CPKNDH; ISSN: 0312-5963
PB Adis International Ltd.
DT Journal
LA English
AB In general, extended-release (ER) formulations are designed to prolong the duration of efficacy and reduce the adverse effects of a drug. These formulations often contain the entire daily dose in a single tablet. Therefore, failure of the ER mechanism not only diminishes the desired benefits, but may temporarily expose the patient to drug concns. higher than those released from a conventional tablet. In this study we determined whether pH has an effect on drug release from the ER formulations of oxybutynin (OROS technol.) and tolterodine (membrane coated beads) in vitro and in vivo. In vitro studies were based on standardized dissoln. expts. for each drug in media of different pH (artificial gastric fluid at pH 1.2, artificial intestinal fluid at pH 7.5, and water). In the two sep., identically designed in vivo studies, single doses of each drug were administered alone and with an antacid to male and female healthy volunteers aged 18-45 years. The randomized, crossover, open-label in vivo studies employed a validated assay to determine plasma concns. of tolterodine and its metabolite 5-hydroxymethyl tolterodine (5-HM), or oxybutynin and its metabolite N-desethyloxybutynin. The in vitro study showed similar slow and steady drug release from ER-oxybutynin in each pH medium, with 64-71% released after 12 h. Drug release from ER-tolterodine

was steady and slow in artificial gastric fluid, with 72.5% of drug released after 12 h. However, drug release was much faster in artificial intestinal fluid and water, where 69.8% and 69.1%, resp., of the drug was released within 4 h. These in vitro results were consistent with the findings of the in vivo studies. In vivo, the pharmacokinetic profile (peak plasma concentration [C_{max}] and area under the concentration-time curve)

of

ER-oxybutynin was similar after administration with or without antacid, whereas C_{max} values of both tolterodine and 5-HM increased significantly when ER-tolterodine was administered with antacid ($p \leq 0.017$ vs ER-tolterodine alone). Changes in pH affected the release of tolterodine from ER-tolterodine, while they had no effect on the release of oxybutynin from the proprietary ER technol. used in ER-oxybutynin. The technol. employed in ER formulations thus det. sensitivity of drug release to external factors.

IT 124937-52-6, Detrol

RL: PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(drug release from ER-tolterodine was faster in nonacidic medium in vitro while tolterodine and its metabolite 5-HM peak concns. increased with no effect on AUC, t_{1/2} when ER-tolterodine was co-administered with antacid in human)

RN 124937-52-6 CAPLUS

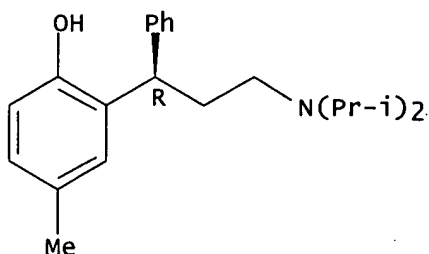
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

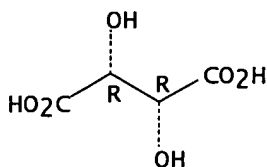


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

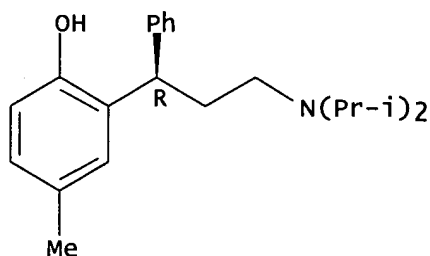
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 40 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:903965 CAPLUS
 DN 141:384269
 TI Pharmaceutical compositions containing phosphodiesterase IV inhibitor and anticholinergic agents for treatment of respiratory diseases and their kits
 IN Abe, Yuzuru; Miki, Ichiro
 PA Kyowa Hakko Kogyo Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 19 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------|----------|-----------------|----------|
| PI | JP 2004300064 | A2 | 20041028 | JP 2003-94507 | 20030331 |
| | | | | JP 2003-94507 | 20030331 |

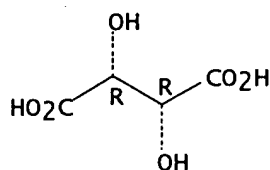
AB Tittle compns., useful for treatment of chronic obstructive pulmonary disease and asthma, contain 7-[2-(3,5-dichloro-4-pyridyl)-1-oxoethyl]-4-methoxy-spiro(1,3-benzodioxole-2,1'-cyclopentane) (I) or its pharmacol. acceptable salts and anticholinergic agents. Thus, I tablets and oxybutynin hydrochloride tablets were formulated.
 IT 124937-52-6, Tolterodine tartrate
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (pharmaceutical compns. containing phosphodiesterase IV inhibitors and anticholinergic agents for treatment of respiratory diseases and their kits)
 RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)
 CM 1
 CRN 124937-51-5
 CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).



CM 2
 CRN 87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 41 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:878262 CAPLUS
 DN 141:337803
 TI Novel polymorphs of tolterodine tartrate
 IN Parthasaradhi, Reddy Bandi; Rathnakar, Reddy Kura; Raji, Reddy Rapolu;
 Muralidhara, Reddy Dasari; Subash, Chander, Reddy Kesireddy
 PA Hetero Drugs Limited, India
 SO PCT Int. Appl., 14 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

Applicants

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|--|----------|-----------------|------------|
| PI | WO 2004089281 | A2 | 20041021 | WO 2003-IN149 | 20030408 |
| | WO 2004089281 | A3 | 20041202 | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| | AU 2003304037 | A1 | 20041101 | AU 2003-304037 | 20030408 |
| | | | | WO 2003-IN149 | A 20030408 |
| | US 2005131067 | A1 | 20050616 | US 2003-510435 | 20030408 |
| | | | | WO 2003-IN149 | W 20030408 |

AB The present invention relates to polymorphs of tolterodine tartrate, to processes for their preparation and to pharmaceutical compns. containing them.

A

process for preparation of tolterodine tartrate crystalline forms comprises the steps of (a) dissolving tolterodine free base in a suitable solvent; (b) adding tartaric acid; and (c) isolating tolterodine tartrate crystalline forms; wherein the suitable solvent is selected from ethanol, methylene dichloride, chloroform, acetone, acetonitrile, 1,4-dioxane, Et acetate, and Me tert-Bu ether, or (a) mixing tolterodine tartrate, an alc. and water, and (b) removing the solvents from the solution by freeze drying. For example, 2.0 g of tolterodine free base was dissolved in 25 mL of Et acetate and 1.2 g of tartaric acid was added to the solution. Then the contents were maintained for 2 h at 25° to 30° and filtered to give 2.2 g of tolterodine tartrate Form II.

IT 124937-52-6P, Tolterodine tartrate

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses) (preparation of crystalline forms of tolterodine tartrate for dosage forms)

RN 124937-52-6 CAPLUS

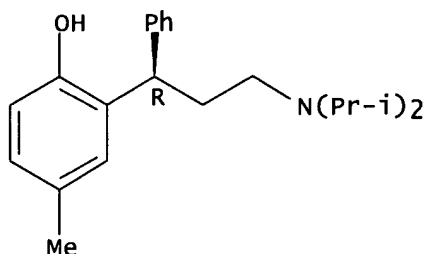
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

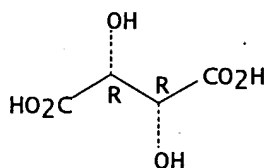


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 42 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:825265 CAPLUS

DN 142:336125

TI Process for preparing (R)-N,N-diisopropyl-3-(2-hydroxy-5-methylphenyl)-3-phenylpropylamine (tolterodine)

IN Ridvan, Ludek; Hruby, Petr; Kuchar, Miroslav

PA Zentiva, A.S., Czech Rep.

SO Czech Rep., 7 pp.

CODEN: CZXXED

DT Patent

LA Czech

FAN.CNT 1

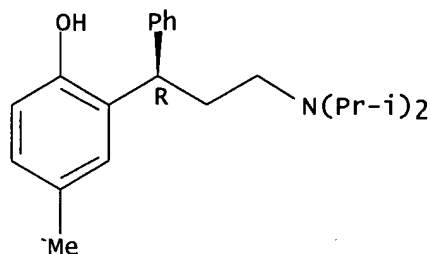
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|------|----------|----------------------------|----------------------|
| PI | CZ 293509 | B6 | 20040512 | CZ 2003-531 CZ 2003-531 | 20030221 20030221 |

OS CASREACT 142:336125; MARPAT 142:336125

AB The title compound I, useful for treating urinary incontinence (no data; no claimed activity), was prepared by optical resolution of racemic 3-(2-alkyloxy-5-methylphenyl)-3-phenylpropanoic acids and subsequent conversion of the corresponding (R)-(+)-acid II [R = alkyl, CH₂Ph] to tolterodine. Thus, optical resolution of 3-(2-benzyloxy-5-methylphenyl)-3-phenylpropanoic acid (preparation given) followed by amidation of the (R)-(+)-acid with diisopropylamine, reduction of the amide with synhydride, removal of the benzyl group, and treatment of the crude product with

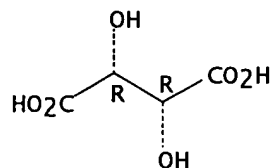
IT tartaric acid afforded I.tartrate.
 124937-52-6P, Tolterodine tartrate
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
 (Preparation)
 (process for preparing (R)-N,N-diisopropyl-3-(2-hydroxy-5-methylphenyl)-3-phenylpropylamine (tolterodine) starting from 3,4-dihydro-6-methyl-4-phenyl-2H-benzopyran-2-one)
 RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
 (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)
 CM 1
 CRN 124937-51-5
 CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).



CM 2
 CRN 87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.

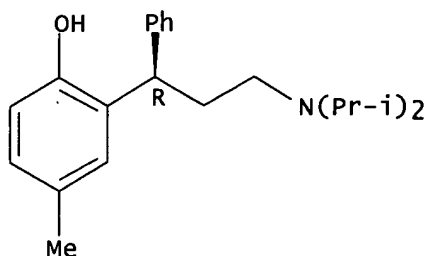


L11 ANSWER 43 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:802289 CAPLUS
 DN 141:301456
 TI New formulations for treatment of overactive bladder comprising
 tolterodine
 IN Nicklasson, Fredrik; Thyresson, Kristina; Lindberg, Nils-olof; Martino,
 Alice C.; Lindell, Katarina
 PA Swed.
 SO U.S. Pat. Appl. Publ., 6 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|-------|-----------------|-------|
| ----- | ---- | ----- | ----- | ----- |

| | | | | | |
|-----|---|----|----------|------------------|------------|
| PI | US 2004191345 | A1 | 20040930 | US 2004-816673 | 20040402 |
| | | | | SE 2003-830 | A 20030326 |
| | AU 2004224556 | A1 | 20041007 | US 2003-460214P | P 20030403 |
| | | | | AU 2004-224556 | 20040316 |
| | | | | SE 2003-830 | A 20030326 |
| | CA 2519119 | AA | 20041007 | WO 2004-IB859 | A 20040316 |
| | | | | CA 2004-2519119 | 20040316 |
| | | | | SE 2003-830 | A 20030326 |
| | | | | WO 2004-IB859 | W 20040316 |
| | WO 2004084864 | A1 | 20041007 | WO 2004-IB859 | 20040316 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | SE 2003-830 | A 20030326 |
| EP | 1605920 | A1 | 20051221 | EP 2004-720944 | 20040316 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK | | | | |
| | | | | SE 2003-830 | A 20030326 |
| | | | | WO 2004-IB859 | W 20040316 |
| BR | 2004008743 | A | 20060328 | BR 2004-8743 | 20040316 |
| | | | | SE 2003-830 | A 20030326 |
| | | | | WO 2004-IB859 | W 20040316 |
| CN | 1764441 | A | 20060426 | CN 2004-80008087 | 20040316 |
| | | | | SE 2003-830 | A 20030326 |
| JP | 2006521347 | T2 | 20060921 | JP 2006-506376 | 20040316 |
| | | | | SE 2003-830 | A 20030326 |
| | | | | WO 2004-IB859 | W 20040316 |
| AB | A tolterodine-containing pharmaceutical formulation that comprises cocoa powder, process for manufacturing the formulation and use of the formulation for | | | | |
| | treating overactive bladder are described. For example, an oral composition was prepared containing tolterodine l-tartrate 0.25%, hydrogenated soybean oil 43.55%, cocoa powder 18.00%, mannitol 18.00%, maize starch 13.35%, Aspartame 0.15%, Acesulfame-K 0.10%, titanium dioxide 2.00%, monosodium glutamate 0.60%, mint and vanilla flavors 3.00%, and soy lecithin 1.00%. | | | | |
| IT | 124937-52-6, Tolterodine tartrate | | | | |
| | RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) | | | | |
| | (oral composition for treatment of overactive bladder comprising tolterodine and cocoa powder) | | | | |
| RN | 124937-52-6 CAPLUS | | | | |
| CN | Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME) | | | | |
| CM | 1 | | | | |
| CRN | 124937-51-5 | | | | |
| CMF | C22 H31 N O | | | | |

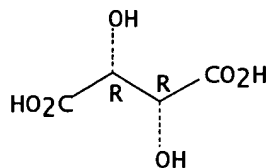
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 44 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:756674 CAPLUS
 DN 141:265984
 TI 3,3-Diarylpropylamine derivatives and processes for isolation thereof
 IN Kumar, Yatendra; Prasad, Mohan; Kumar, Neela Praveen; Nayyar, Kaushal;
 Misra, Satyananda
 PA Ranbaxy Laboratories Limited, India
 SO PCT Int. Appl., 21 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| PI WO 2004078700 | A1 | 20040916 | WO 2004-IB638 | 20040308 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2004218178 | A1 | 20040916 | IN 2003-DE237 | A 20030306 |
| | | | AU 2004-218178 | 20040308 |
| | | | IN 2003-DE237 | A 20030306 |
| | | | WO 2004-IB638 | A 20040308 |
| CA 2517824 | AA | 20040916 | CA 2004-2517824 | 20040308 |
| | | | IN 2003-DE237 | A 20030306 |
| | | | WO 2004-IB638 | W 20040308 |
| EP 1603862 | A1 | 20051214 | EP 2004-718361 | 20040308 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK | | | | |

IN 2003-DE237

A 20030306

WO 2004-IB638

W 20040308

AB The invention relates to 3,3-diarylpropylamines derivs. and processes for producing them. More particularly, it relates to the preparation of pure tolterodine or a pharmaceutically acceptable salt thereof and pharmaceutical compns. that include the pure tolterodine or a pharmaceutically acceptable salt thereof. It also relates to a novel 3,3-diarylpropylamine derivative, referred to as tolterodine dimer. Chemical, tolterodine dimer is N,N-di-[3-[2-hydroxy-5-methylphenyl]-3-phenylpropyl]isopropylamine. The invention also relates to use of pure tolterodine or tolterodine dimer as reference stds. or reference markers for checking the purity of tolterodine.

IT 124937-52-6P, Tolterodine tartrate

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(3,3-diarylpropylamine derivs. and processes for isolation thereof)

RN 124937-52-6 CAPLUS

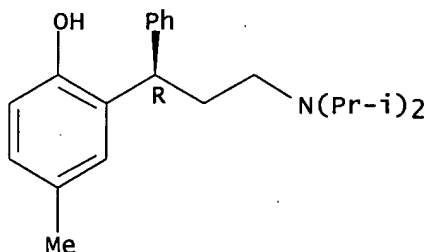
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

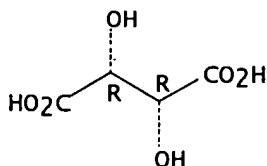


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 45 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:710573 CAPLUS

DN 141:355540

TI A validated chiral HPLC method for the enantiomeric separation of

tolterodine tartarate

AU Kumar, Y. Ravindra; Ramulu, G.; Vevakanand, V. V.; Vaidyanathan, Gopal; Srinivas, Keesari; Kumar, M. Kishore; Mukkanti, K.; Reddy, M. Satyanarayana; Venkatraman, S.; Suryanarayana, M. V.

CS Bulk Actives Unit-III, IDA-Bollaram, Dr. Reddy's Laboratories Ltd., Hyderabad, AP, 502325, India

SO Journal of Pharmaceutical and Biomedical Analysis (2004), 35(5), 1279-1285
CODEN: JPBADA; ISSN: 0731-7085

PB Elsevier B.V.

DT Journal

LA English

AB An isocratic chiral HPLC method was developed for the separation of tolterodine tartrate enantiomers. The mobile phase consists of n-hexane and iso-Pr alc. in the ratio of 980:20 (volume/volume) with 1 mL diethylamine and 0.6 mL trifluoroacetic acid. Chiralcel OD-H (250 mm + 4.6 mm) column was used at constant room temperature. Flow rate was kept at 0.5 mL/min. This method is capable of detecting the S-isomer up to 0.1 µg/mL. The method was validated in terms of linearity, precision, limit of detection (LOD), and limit of quantification (LOQ).

IT 124937-52-6, Tolterodine tartrate
RL: ANT (Analyte); ANST (Analytical study)
(a validated chiral HPLC method for the enantiomeric separation of tolterodine tartrate)

RN 124937-52-6 CAPLUS

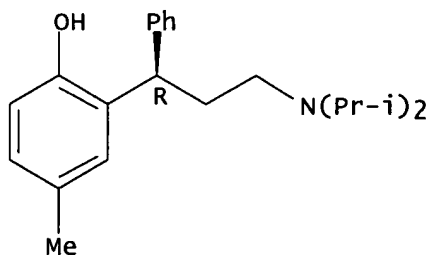
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

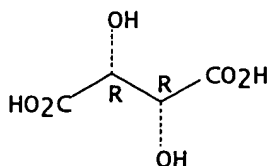


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

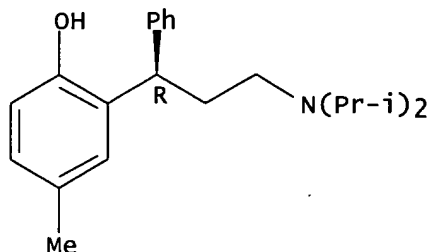
L11 ANSWER 46 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:633513 CAPLUS
DN 141:134132
TI Reduced dose of tolterodine and other antimuscarinic agents for treating urinary disorders
IN Korberly, Barbara H.; Danehower, Susan M.
PA Pharmacia AB, Swed.
SO PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|------------------|------------|
| PI | WO 2004064821 | A1 | 20040805 | WO 2004-IB169 | 20040114 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI | | | | |
| | AU 2004206110 | A1 | 20040805 | US 2003-441690P | P 20030122 |
| | | | | AU 2004-206110 | 20040114 |
| | | | | US 2003-441690P | P 20030122 |
| | CA 2514022 | AA | 20040805 | WO 2004-IB169 | W 20040114 |
| | | | | CA 2004-2514022 | 20040114 |
| | | | | US 2003-441690P | P 20030122 |
| | EP 1589958 | A1 | 20051102 | WO 2004-IB169 | W 20040114 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | EP 2004-702017 | 20040114 |
| | | | | US 2003-441690P | P 20030122 |
| | BR 2004006861 | A | 20060103 | WO 2004-IB169 | W 20040114 |
| | | | | BR 2004-6861 | 20040114 |
| | | | | US 2003-441690P | P 20030122 |
| | CN 1741796 | A | 20060301 | WO 2004-IB169 | W 20040114 |
| | | | | CN 2004-80002565 | 20040114 |
| | JP 2006515607 | T2 | 20060601 | US 2003-441690P | P 20030122 |
| | | | | JP 2006-500313 | 20040114 |
| | | | | US 2003-441690P | P 20030122 |
| | US 2006047007 | A1 | 20060302 | WO 2004-IB169 | W 20040114 |
| | | | | US 2004-762726 | 20040122 |
| | | | | US 2003-441690P | P 20030122 |
| AB | The invention discloses a method, preferably an oral method, for treating urinary disorders, e.g. unstable or overactive bladder, while minimizing the occurrences of dry mouth, dyspepsia and reduced stream of tears. The methods of the invention comprise orally administering to a mammal, preferably a human, a pharmaceutically ED of an antimuscarinic agent, such as tolterodine, when needed, whereby a symptomatic relief of urgency and/or frequency is achieved. | | | | |
| IT | 124937-52-6, Detrol RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (tolterodine or other antimuscarinic agent dose reduction for treatment of urinary disorders) | | | | |
| RN | 124937-52-6 CAPLUS | | | | |
| CN | Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME) | | | | |

CM 1

CRN 124937-51-5
CMF C22 H31 N O

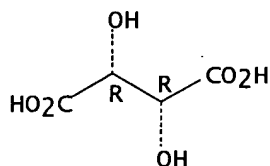
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 47 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:428812 CAPLUS
DN 140:412343
TI Combination therapy for postmenopausal female sexual dysfunction
comprising an androgen, an estrogen and an antimuscarinic
IN Bilkey, Chris R.; Slater, Greg J.
PA Pharmacia & Upjohn Company, USA
SO PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 2004043429 | A1 | 20040527 | WO 2003-US34418 | 20031029 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |

AU 2003287248

A1 20040603

US 2002-425537P

P 20021112

AU 2003-287248

20031029

US 2002-425537P

P 20021112

WO 2003-US34418

W 20031029

AB A set of pharmaceutical dosage forms is provided, each comprising an androgen and at least one agent selected from the group consisting of an estrogen and an antimuscarinic, in total and relative dosage amts. that are therapeutically effective in treatment of female sexual dysfunction (FSD) or postmenopausal sexual avoidance (PMSA), said dosage forms being adapted for intravaginal administration. A method of treatment of FSD or PMSA comprises administering intravaginally, in a treatment regimen extending over a period of at least 7 days, dosage forms at least a portion of which comprise an androgen and at least one agent selected from the group consisting of an estrogen and an antimuscarinic, in total and relative dosage amts. that are therapeutically effective in treatment of FSD or PMSA, wherein no more than one dosage form is administered on any day. Also provided is a kit useful in implementing such a treatment regimen.

IT 124937-52-6, Tolterodine tartrate

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(combination therapy for postmenopausal female sexual dysfunction comprising an androgen, an estrogen and an antimuscarinic)

RN 124937-52-6 CAPLUS

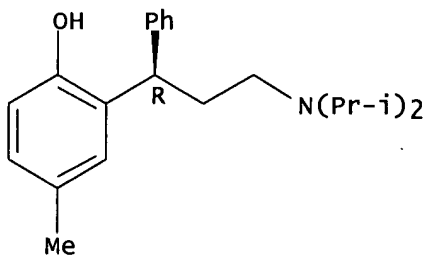
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

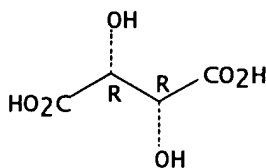


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 48 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:410936 CAPLUS

DN 141:46646

TI Management of overactive bladder: defining the role of extended-release tolterodine

AU Keam, Susan J.; Perry, Caroline M.

CS Adis International Inc., Yardley, PA, USA

SO Disease Management & Health Outcomes (2004), 12(2), 121-142

CODEN: DMHOFV; ISSN: 1173-8790

PB Adis International Ltd.

DT Journal; General Review

LA English

AB A review. overactive bladder (OAB), a common condition affecting \approx 16-17% of adult men and women in Europe and the US, is characterized by symptoms of urinary urgency, with or without urge urinary incontinence (UUI), usually with micturition frequency and nocturia. OAB is thought to result from abnormal, involuntary detrusor contractions during bladder filling. The symptoms of OAB have a considerable adverse effect on quality of life (QOL) in affected patients, and are associated with an increased risk of comorbidities, and increased direct and indirect costs. Management of OAB focuses on symptom improvement, and includes nonpharmacol. and pharmacol. therapy. Extended-release tolterodine (Detrusitol XL, Detrol LA, Detrusitol SR, Detrusitol Neo, Detrusitol Retard, Unidet LA) is an oral, once-daily, nonselective, competitive antimuscarinic drug. It acts on smooth muscle motor efferent pathways, including bladder detrusor muscle, and is a first-line therapy for OAB. Extended-release tolterodine is at least as effective as immediate-release tolterodine in improving UUI and other symptoms associated with OAB (including urinary frequency, urge symptoms, voided volume/micturition), and in improving health-related QOL. It has similar efficacy to oral immediate- or extended-release oxybutynin, or transdermal oxybutynin. The likelihood of dry mouth, the most bothersome anticholinergic adverse effect associated with antimuscarinic drugs, is significantly reduced with extended-release tolterodine in patients with OAB compared with immediate-release tolterodine. Dry mouth also occurs significantly less frequently with extended-release tolterodine than with immediate- or extended-release oxybutynin. The incidence of dry mouth with extended-release tolterodine or transdermal oxybutynin is similar. In economic models, extended-release tolterodine is more cost effective in patients with OAB than no treatment, or treatment with immediate-release tolterodine or immediate-release oxybutynin, and is as cost effective as extended-release oxybutynin. In conclusion, clin. and economic data support the use of extended-release tolterodine as a first-line therapy in the management of adult patients with OAB. It is at least as effective as immediate-release tolterodine, but is associated with a lower incidence of dry mouth. Moreover, the convenient once-daily administration regimen offers the potential for good compliance. The favorable efficacy and tolerability profile of extended-release tolterodine has been demonstrated for up to 12 mo. Extended-release tolterodine is as effective as oral immediate- or extended-release oxybutynin, but is better tolerated in terms of dry mouth. It has similar efficacy and tolerability (including dry mouth) to transdermal oxybutynin. Extended-release tolterodine is, therefore, a valuable first-line therapy in the treatment of OAB.

IT 124937-52-6, Detrusitol

RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (extended-release tolterodine in management of overactive bladder)

RN 124937-52-6 CAPLUS

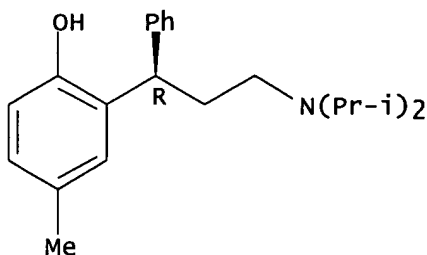
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
(2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

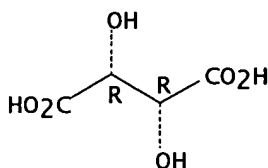


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 144 THERE ARE 144 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 49 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:203653 CAPLUS

DN 140:241060

TI Oral liquid tolterodine compositions

IN Reo, Joseph P.; Kienle, Kathryn M.; Fredrickson, Jennifer K.

PA Pharmacia Corporation, USA

SO PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|--|----------|-----------------|----------|
| PI | WO 2004019925 | A1 | 20040311 | WO 2003-US26675 | 20030825 |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, | | | |

KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

| | | | | | |
|---|----|----------|-----------------|---|----------|
| CA 2496806 | AA | 20040311 | US 2002-406429P | P | 20020828 |
| | | | CA 2003-2496806 | | 20030825 |
| | | | US 2002-406429P | P | 20020828 |
| | | | WO 2003-US26675 | W | 20030825 |
| AU 2003265680 | A1 | 20040319 | AU 2003-265680 | | 20030825 |
| | | | US 2002-406429P | P | 20020828 |
| | | | WO 2003-US26675 | W | 20030825 |
| US 2005032905 | A1 | 20050210 | US 2003-647816 | | 20030825 |
| US 7101888 | B2 | 20060905 | | | |
| | | | US 2002-406429P | P | 20020828 |
| EP 1536780 | A1 | 20050608 | EP 2003-791779 | | 20030825 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | US 2002-406429P | P | 20020828 |
| | | | WO 2003-US26675 | W | 20030825 |
| BR 2003013714 | A | 20050628 | BR 2003-13714 | | 20030825 |
| | | | US 2002-406429P | P | 20020828 |
| | | | WO 2003-US26675 | W | 20030825 |
| JP 2006500381 | T2 | 20060105 | JP 2004-531469 | | 20030825 |
| | | | US 2002-406429P | P | 20020828 |
| | | | WO 2003-US26675 | W | 20030825 |

AB A pharmaceutical composition in a form of an oral liquid comprises water having in solution therein a water-soluble salt of a tolterodine-related compound at a concentration in the composition The composition has a pH of about 2-6 and further comprises a sweetening agent and an antimicrobial agent at a concentration that is antimicrobially effective at the pH of the composition The composition is useful for treating a muscarinic receptor-mediated disorder, more particularly overactive bladder, in a subject by orally administering to the subject an effective amount of the composition Thus, a formulation contained tolterodine L-tartrate 0.2, 85% sucrose solution 382.42, 70% sorbitol solution 54, citric acid 5.88, sodium citrate 5, sodium benzoate 1, artificial wild cherry flavor 1, and SweetAm powder 0.5 mg, and water qs to 1 mL.

IT 124937-52-6, Tolterodine tartrate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oral liquid tolterodine comps.)

RN 124937-52-6 CAPLUS

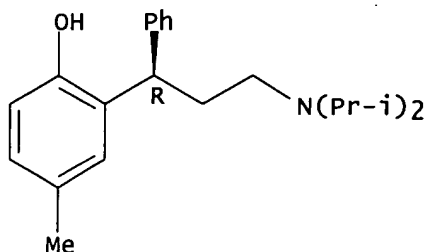
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

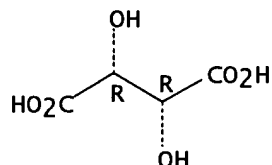


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 50 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:1007337 CAPLUS

DN 140:53286

TI Clinical efficacy and tolerability of extended-release tolterodine and immediate-release oxybutynin in Japanese and Korean patients with an overactive bladder: a randomized, placebo-controlled trial

AU Homma, Y.; Paick, J. S.; Lee, J. G.; Kawabe, K.

CS Japanese and Korean Tolterodine Study Group, Department of Urology, Tokyo University, Tokyo, Japan

SO BJU International (2003), 92(7), 741-747

CODEN: BJINFO; ISSN: 1464-4096

PB Blackwell Publishing Ltd.

DT Journal

LA English

AB Objective: To compare extended-release (ER) tolterodine and immediate-release (IR) oxybutynin with placebo in Japanese and Korean patients with an overactive bladder (OAB). Patients and Methods: Men and women aged ≥ 20 yr with symptoms of urinary urgency, urinary frequency (≥ 8 micturitions/24 h), urge incontinence (≥ 5 episodes/wk) and symptoms of OAB for ≥ 6 mo were randomized to double-blind treatment with tolterodine ER 4 mg once daily, oxybutynin IR 3 mg three times daily or placebo for 12 wk. Efficacy assessments included changes from baseline in nos. of incontinence episodes per wk, voids/24 h and mean volume voided/void. Patient perceptions of bladder condition, urgency and treatment benefit were also assessed. Results: In all, 608 patients were randomized to treatment with tolterodine (240), oxybutynin (246) or placebo (122). More patients prematurely withdrew on oxybutynin (23%) than with tolterodine (10.4%) or placebo (16.4%). After 12 wk of treatment, the median number of incontinence episodes/wk was reduced significantly more in the tolterodine (79%; $P = 0.0027$) and oxybutynin groups (76.5%; $P = 0.0168$) than on placebo (46.4%). There were also significantly greater improvements in the number of voids/24 h and volume voided/void with tolterodine and oxybutynin than with placebo. More patients in the tolterodine and oxybutynin than in the placebo groups reported improvements in perceived bladder condition, ability to hold urine and treatment benefit. Patients treated with oxybutynin reported more adverse events than those treated with tolterodine or placebo. Dry mouth was significantly more common with oxybutynin than with tolterodine (53.7% vs. 33.5%; $P < 0.001$), and occurred in 9.8% of placebo patients. Conclusion: Tolterodine ER has similar efficacy but is better tolerated than oxybutynin IR in Japanese and Korean patients with OAB.

IT 124937-52-6, Detrol

RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (extended-release tolterodine vs. immediate-release oxybutynin in Japanese and Korean patients with overactive bladder)

RN 124937-52-6 CAPLUS

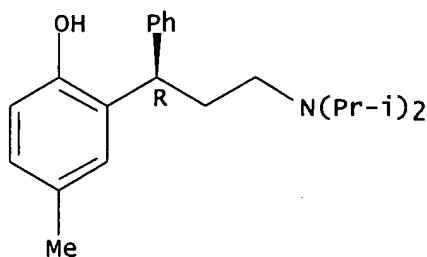
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

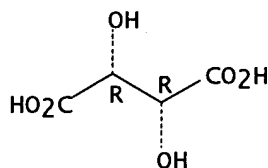


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 51 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:971836 CAPLUS

DN 140:23256

TI Combination therapy for treatment of amyotrophic lateral sclerosis (ALS) with cyclooxygenase-2 (COX 2) inhibitor(s) and a second drug

IN Isakson, Peter C.

PA Pharmacia Corporation, USA

SO PCT Int. Appl., 358 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------|----------|-----------------|----------|
| PI | WO 2003101380 | A2 | 20031211 | WO 2003-US14547 | 20030528 |
| | WO 2003101380 | A3 | 20041111 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

| | | | | | |
|---------------|----|----------|---|---|----------|
| | | | US 2002-384104P | P | 20020531 |
| | | | US 2003-444071 | A | 20030523 |
| US 2004063751 | A1 | 20040401 | US 2003-444071 | | 20030523 |
| | | | US 2002-384104P | P | 20020531 |
| CA 2487885 | AA | 20031211 | CA 2003-2487885 | | 20030528 |
| | | | US 2002-384104P | P | 20020531 |
| | | | US 2003-444071 | A | 20030523 |
| | | | WO 2003-US14547 | W | 20030528 |
| AU 2003241400 | A1 | 20031219 | AU 2003-241400 | | 20030528 |
| | | | US 2002-384104P | P | 20020531 |
| | | | US 2003-444071 | A | 20030523 |
| | | | WO 2003-US14547 | W | 20030528 |
| BR 2003011524 | A | 20050510 | BR 2003-11524 | | 20030528 |
| | | | US 2002-384104P | P | 20020531 |
| | | | US 2003-444071 | A | 20030523 |
| | | | WO 2003-US14547 | W | 20030528 |
| EP 1539169 | A2 | 20050615 | EP 2003-731134 | | 20030528 |
| | | | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | |
| | | | US 2002-384104P | P | 20020531 |
| | | | US 2003-444071 | A | 20030523 |
| | | | WO 2003-US14547 | W | 20030528 |
| JP 2005534642 | T2 | 20051117 | JP 2004-508738 | | 20030528 |
| | | | US 2002-384104P | P | 20020531 |
| | | | US 2003-444071 | A | 20030523 |
| | | | WO 2003-US14547 | W | 20030528 |

OS MARPAT 140:23256

AB A method of treating, preventing, or inhibiting ALS, in a subject in need of such treatment, inhibition or prevention. The method comprises administering to a subject one or more cyclooxygenase-2 selective inhibitor(s) or isomer(s) or pharmaceutically acceptable salt(s), ester(s), or prodrug(s) thereof, in combination with one or more second drugs, wherein the amount of the cyclooxygenase-2 selective inhibitor(s) or isomer(s) or pharmaceutically acceptable salt(s), ester(s), or prodrug(s) thereof in combination with the amount of second drug(s) constitutes an ALS treatment, inhibition or prevention effective amount

IT 124937-52-6, Detro1

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)

(combination therapy for amyotrophic lateral sclerosis treatment of with COX-2 inhibitor and second drug)

RN 124937-52-6 CAPLUS

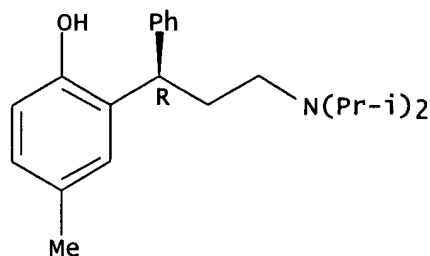
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

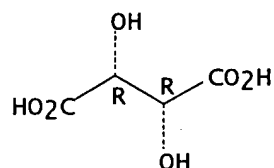
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 52 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN /
 AN 2003:836606 CAPLUS
 DN 139:328349
 TI Tolterodine and hydroxytolterodine salts and their use as pharmaceuticals
 IN Hawley, Michael; Singh, Satish Kumar; Morozowich, Walter; Warchol, Mark P.
 PA Pharmacia & Upjohn Company, USA
 SO U.S. Pat. Appl. Publ., 9 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----|--|------|----------|-----------------|------------|
| PI | US 2003199582 | A1 | 20031023 | US 2002-127875 | 20020423 |
| | US 7005449 | B2 | 20060228 | | |
| | CA 2483092 | AA | 20031106 | CA 2003-2483092 | 20030422 |
| | | | | US 2002-127875 | A 20020423 |
| | | | | WO 2003-SE634 | W 20030422 |
| WO | 2003090734 | A1 | 20031106 | WO 2003-SE634 | 20030422 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | US 2002-127875 | A 20020423 |
| AU | 2003237724 | A1 | 20031110 | AU 2003-237724 | 20030422 |
| | | | | US 2002-127875 | A 20020423 |

| | | | | | |
|---|----|----------|----------------|---|----------|
| EP 1496882 | A1 | 20050119 | WO 2003-SE634 | W | 20030422 |
| EP 1496882 | B1 | 20060802 | EP 2003-736380 | | 20030422 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | | |
| BR 2003009439 | A | 20050215 | US 2002-127875 | A | 20020423 |
| | | | WO 2003-SE634 | W | 20030422 |
| | | | BR 2003-9439 | | 20030422 |
| | | | US 2002-127875 | A | 20020423 |
| CN 1646110 | A | 20050727 | WO 2003-SE634 | W | 20030422 |
| | | | CN 2003-809064 | | 20030422 |
| JP 2005535578 | T2 | 20051124 | US 2002-127875 | A | 20020423 |
| | | | JP 2003-587370 | | 20030422 |
| | | | US 2002-127875 | A | 20020423 |
| AT 334665 | E | 20060815 | WO 2003-SE634 | W | 20030422 |
| | | | AT 2003-736380 | | 20030422 |
| NO 2004004449 | A | 20041026 | US 2002-127875 | A | 20020423 |
| | | | NO 2004-4449 | | 20041019 |
| | | | US 2002-127875 | A | 20020423 |
| | | | WO 2003-SE634 | A | 20030422 |

OS MARPAT 139:328349

AB The present invention concerns novel pharmaceutically active compds., pharmaceutical compns. containing the same, the compds. for use as medicaments, and use of the compds. for the manufacture of specific medicaments. The present invention also concerns a method of treatment involving administration of the compds. by inhalation and insufflation. Specifically, the compds. are pharmaceutically acceptable salts of tolterodine or hydroxytolterodine, wherein the salt is of an acid selected from the group consisting of aliphatic mono- and dicarboxylic acids comprising from 7 to 24 carbon atoms, alkanedisulfonic acids comprising from 2 to 4 carbon atoms, naphthoic acid derivs. comprising from 11 to 27 carbon atoms, maleic acid and fumaric acid.

IT 124937-52-6, Tolterodine tartrate

RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(tolterodine and hydroxytolterodine salts for inhalation)

RN 124937-52-6 CAPLUS

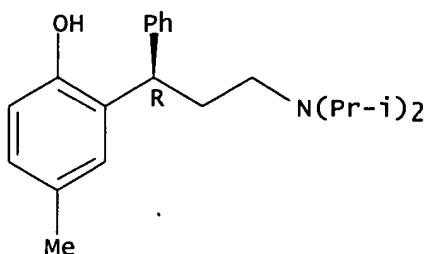
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

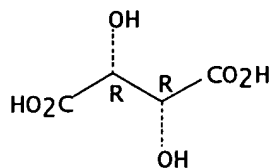
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 53 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:784592 CAPLUS
DN 139:281288
TI Controlled-release formulations for tolterodine
IN Nilvebrant, Lisbeth; Hallen, Bengt; Olsson, Birgitta; Strombom, Jan; Gren, Torkek; Ringberg, Anders; Wikberg, Martin
PA Pharmacia AB, Swed.
SO U.S., 7 pp., Cont.-in-part of Appl. No. PCT/SE99/02052.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 5

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--|----------|-----------------|-------------|
| PI US 6630162 | B1 | 20031007 | US 2000-708428 | 20001109 |
| | | | WO 1999-SE2052 | A2 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | US 2000-202862P | P 20000510 |
| WO 2000027364 | A1 | 20000518 | WO 1999-SE2052 | 19991111 |
| W: | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | |
| RW: | GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |

PATENT FAMILY INFORMATION:

FAN 2000:161114

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------|--|----------|-----------------|------------|
| PI WO 2000012069 | A1 | 20000309 | WO 1999-SE1463 | 19990826 |
| W: | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW | | | |
| RW: | GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | |
| | | | SE 1998-2864 | A 19980827 |
| | | | SE 1998-3871 | A 19981111 |
| CA 2311755 | AA | 20000309 | CA 1999-2311755 | 19990826 |

| | | | | | |
|---|----|----------|-------------------|---|----------|
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| AU 9958918 | A1 | 20000321 | AU 1999-58918 | | 19990826 |
| AU 745190 | B2 | 20020314 | | | |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| EP 1039882 | A1 | 20001004 | EP 1999-946521 | | 19990826 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | | |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| TR 200001998 | T1 | 20010122 | TR 2000-200001998 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| HU 200100437 | A2 | 20020529 | HU 2001-437 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| NZ 504618 | A | 20020927 | NZ 1999-504618 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| IL 136294 | A1 | 20040208 | IL 1999-136294 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| CA 2350061 | AA | 20000518 | CA 1999-2350061 | | 19991111 |
| CA 2350061 | C | 20050517 | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| WO 2000027364 | A1 | 20000518 | WO 1999-SE2052 | | 19991111 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| AU 2000014366 | A5 | 20000529 | AU 2000-14366 | | 19991111 |
| AU 762410 | B2 | 20030626 | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| BR 9915142 | A | 20010807 | BR 1999-15142 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| EP 1128819 | A1 | 20010905 | EP 1999-971702 | | 19991111 |
| EP 1128819 | B1 | 20030820 | | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| HU 200105038 | A2 | 20020629 | HU 2001-5038 | | 19991111 |

| | | | | | |
|---------------|----|----------|------------------|---|----------|
| EE 200100254 | A | 20021216 | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | EE 2001-254 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| JP 2003517446 | T2 | 20030527 | JP 2000-580595 | | 19991111 |
| JP 3616011 | B2 | 20050202 | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| NZ 511430 | A | 20030530 | NZ 1999-511430 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| AT 247458 | E | 20030915 | AT 1999-971702 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| PT 1128819 | T | 20031231 | PT 1999-971702 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| ES 2204193 | T3 | 20040416 | ES 1999-971702 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| US 6911217 | B1 | 20050628 | US 2001-763281 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| SK 284758 | B6 | 20051103 | SK 2001-625 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | A | 19991111 |
| TW 222879 | B1 | 20041101 | TW 2000-89102338 | | 20000211 |
| | | | SE 1998-3871 | A | 19981111 |
| BG 104476 | A | 20001229 | BG 2000-104476 | | 20000526 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| NO 2000002977 | A | 20000609 | NO 2000-2977 | | 20000609 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3864 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| US 6770295 | B1 | 20040803 | US 2000-582498 | | 20000809 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| ZA 2001003575 | A | 20020503 | ZA 2001-3575 | | 20010503 |
| | | | SE 1998-3871 | A | 19981111 |
| NO 2001002314 | A | 20010709 | NO 2001-2314 | | 20010510 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| HR 2001000333 | A1 | 20030430 | HR 2001-333 | | 20010510 |
| HR 20010333 | B1 | 20041031 | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| BG 105582 | A | 20011231 | BG 2001-105582 | | 20010608 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |

| | | | | | |
|---|-------|----------|-----------------|----|----------|
| HK 1034664 | A1 | 20060908 | WO 1999-SE2052 | W | 19991111 |
| | | | HK 2001-104868 | | 20010712 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| HK 1040917 | A1 | 20050527 | WO 1999-SE1463 | W | 19990826 |
| | | | HK 2002-102521 | | 20020404 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | A | 19991111 |
| FAN 2000:161115 | | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
| ----- | ----- | ----- | ----- | | ----- |
| PI WO 2000012070 | A1 | 20000309 | WO 1999-SE1464 | | 19990826 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, | | | | | |
| CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, | | | | | |
| IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, | | | | | |
| MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, | | | | | |
| SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, | | | | | |
| ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, | | | | | |
| CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | | |
| | | | SE 1998-2864 | A | 19980827 |
| CA 2341063 | AA | 20000309 | CA 1999-2341063 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | WO 1999-SE1464 | W | 19990826 |
| AU 9958919 | A1 | 20000321 | AU 1999-58919 | | 19990826 |
| AU 758399 | B2 | 20030320 | | | |
| | | | SE 1998-2864 | A | 19980827 |
| | | | WO 1999-SE1464 | W | 19990826 |
| EP 1105111 | A1 | 20010613 | EP 1999-946522 | | 19990826 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, | | | | | |
| IE, SI, LT, LV, FI, RO | | | | | |
| | | | SE 1998-2864 | A | 19980827 |
| | | | WO 1999-SE1464 | W | 19990826 |
| JP 2002523446 | T2 | 20020730 | JP 2000-567189 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | WO 1999-SE1464 | W | 19990826 |
| NZ 509928 | A | 20030829 | NZ 1999-509928 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | WO 1999-SE1464 | W | 19990826 |
| ZA 2000002488 | A | 20010516 | ZA 2000-2488 | | 20000519 |
| | | | SE 1998-2864 | A | 19980827 |
| US 6517864 | B1 | 20030211 | US 2001-763654 | | 20010430 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | WO 1999-SE1464 | W | 19990826 |
| US 2003124179 | A1 | 20030703 | US 2002-301719 | | 20021122 |
| US 7008637 | B2 | 20060307 | | | |
| | | | SE 1998-2864 | A | 19980827 |
| | | | WO 1999-SE1464 | W | 19990826 |
| | | | US 2001-763654 | A1 | 20010430 |
| FAN 2000:335217 | | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
| ----- | ----- | ----- | ----- | | ----- |
| PI WO 2000027364 | A1 | 20000518 | WO 1999-SE2052 | | 19991111 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, | | | | | |
| CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, | | | | | |
| IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, | | | | | |
| MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, | | | | | |
| SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, | | | | | |
| DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, | | | | | |

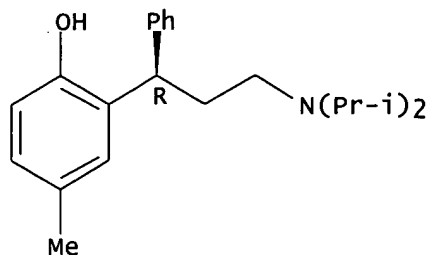
| | | | | | |
|---------------|----|----------|--|---|----------|
| | | | CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| WO 2000012069 | A1 | 20000309 | WO 1999-SE1463 | | 19990826 |
| W: | | | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW | | |
| RW: | | | GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | |
| | | | SE 1998-2864 | A | 19980827 |
| CA 2350061 | AA | 20000518 | SE 1998-3871 | A | 19981111 |
| CA 2350061 | C | 20050517 | CA 1999-2350061 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| AU 2000014366 | A5 | 20000529 | AU 2000-14366 | | 19991111 |
| AU 762410 | B2 | 20030626 | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| BR 9915142 | A | 20010807 | BR 1999-15142 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| EP 1128819 | A1 | 20010905 | EP 1999-971702 | | 19991111 |
| EP 1128819 | B1 | 20030820 | | | |
| R: | | | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| EE 200100254 | A | 20021216 | EE 2001-254 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| JP 2003517446 | T2 | 20030527 | JP 2000-580595 | | 19991111 |
| JP 3616011 | B2 | 20050202 | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| NZ 511430 | A | 20030530 | NZ 1999-511430 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| AT 247458 | E | 20030915 | AT 1999-971702 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| US 6911217 | B1 | 20050628 | US 2001-763281 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| SK 284758 | B6 | 20051103 | SK 2001-625 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | A | 19991111 |
| TW 222879 | B1 | 20041101 | TW 2000-89102338 | | 20000211 |

| | | | | | |
|---|----|----------|-----------------|----|----------|
| CA 2387973 | AA | 20010517 | SE 1998-3871 | A | 19981111 |
| | | | CA 2000-2387973 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| WO 2001034139 | A1 | 20010517 | WO 2000-SE2061 | | 20001024 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, | | | | | |
| CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, | | | | | |
| IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, | | | | | |
| MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, | | | | | |
| SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, | | | | | |
| DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, | | | | | |
| CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | | |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| AU 2001013192 | A5 | 20010606 | AU 2001-13192 | | 20001024 |
| AU 784104 | B2 | 20060202 | | | |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| BR 2000015346 | A | 20020625 | BR 2000-15346 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| EP 1227806 | A1 | 20020807 | EP 2000-975092 | | 20001024 |
| EP 1227806 | B1 | 20050803 | | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, | | | | | |
| IE, SI, LT, LV, FI, RO, MK, CY, AL | | | | | |
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| HU 200203028 | A2 | 20030228 | HU 2002-3028 | | 20001024 |
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| JP 2003513918 | T2 | 20030415 | JP 2001-536139 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| NZ 518309 | A | 20030530 | NZ 2000-518309 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| EE 200200245 | A | 20030616 | EE 2002-245 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| AT 300941 | E | 20050815 | AT 2000-975092 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| PT 1227806 | T | 20051031 | PT 2000-975092 | | 20001024 |
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| ES 2245320 | T3 | 20060101 | ES 2000-975092 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| US 6630162 | B1 | 20031007 | US 2000-708428 | | 20001109 |
| | | | WO 1999-SE2052 | A2 | 19991111 |
| | | | SE 2000-782 | A | 20000309 |

| | | | | | |
|---|-------|----------|-----------------|-------|----------|
| ZA 2001003575 | A | 20020503 | US 2000-202862P | P | 20000510 |
| NO 2001002314 | A | 20010709 | ZA 2001-3575 | | 20010503 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | NO 2001-2314 | | 20010510 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| HR 2001000333 | A1 | 20030430 | HR 2001-333 | | 20010510 |
| HR 20010333 | B1 | 20041031 | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| BG 105582 | A | 20011231 | BG 2001-105582 | | 20010608 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| HK 1040917 | A1 | 20050527 | HK 2002-102521 | | 20020404 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | A | 19991111 |
| ZA 2002002767 | A | 20030409 | ZA 2002-2767 | | 20020409 |
| NO 2002002264 | A | 20020513 | WO 1999-SE2052 | A | 19991111 |
| | | | NO 2002-2264 | | 20020513 |
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| FAN 2001:359788 | | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
| ----- | ----- | ----- | ----- | ----- | |
| PI WO 2001034139 | A1 | 20010517 | WO 2000-SE2061 | | 20001024 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | | |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| WO 2000027364 | A1 | 20000518 | WO 1999-SE2052 | | 19991111 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| CA 2387973 | AA | 20010517 | CA 2000-2387973 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| AU 2001013192 | A5 | 20010606 | AU 2001-13192 | | 20001024 |
| AU 784104 | B2 | 20060202 | | | |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| BR 2000015346 | A | 20020625 | BR 2000-15346 | | 20001024 |

| | | | | | |
|---------------|--|----------|----------------|---|----------|
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| EP 1227806 | A1 | 20020807 | EP 2000-975092 | | 20001024 |
| EP 1227806 | B1 | 20050803 | | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | | | |
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| HU 200203028 | A2 | 20030228 | HU 2002-3028 | | 20001024 |
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| JP 2003513918 | T2 | 20030415 | JP 2001-536139 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| NZ 518309 | A | 20030530 | NZ 2000-518309 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| EE 200200245 | A | 20030616 | EE 2002-245 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| AT 300941 | E | 20050815 | AT 2000-975092 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| NO 2002002264 | A | 20020513 | NO 2002-2264 | | 20020513 |
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| AB | The invention relates to a pharmaceutical formulation containing tolterodine, a tolterodine-related compound, or a pharmacol. acceptable salt thereof, as active ingredient. The formulation exhibits a controlled in vitro release of the active ingredient in phosphate buffer at pH 6.8 of not less than about 80% after 18 h. After oral administration to a patient the formulation is capable of maintaining a substantially constant serum level of the active moiety or moieties for 24 h. The invention also relates to the use of the pharmaceutical formulation for treating overactive bladder and gastrointestinal disorders. For example, controlled-release beads with a three-layer coating were prepared. Starch-containing sugar spheres (cores) were coated with a Surelease seal coat, a tolterodine tartrate/hydroxypropyl Me cellulose (HPMC) layer, and a Surelease/HPMC final layer. After tray drying, the coated spheres were filled into hard gelatin capsules to obtain 2 mg and 4 mg tolterodine L-tartrate capsules. | | | | |
| IT | 124937-52-6, Tolterodine tartrate | | | | |
| | RL: PKT (Pharmacokinetics); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) | | | | |
| | (controlled-release oral formulations for tolterodine) | | | | |
| RN | 124937-52-6 CAPLUS | | | | |
| CN | Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME) | | | | |
| CM | 1 | | | | |
| CRN | 124937-51-5 | | | | |
| CMF | C22 H31 N O | | | | |

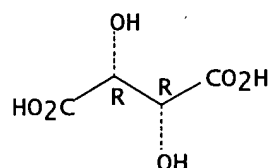
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 54 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:678653 CAPLUS
DN 139:207821
TI Use of cyclooxygenase inhibitors and antimuscarinic agents for the
treatment of incontinence
IN Versi, Ebrahim
PA Pharmacia Corporation, USA
SO PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------|------|----------|--|------------|
| PI WO 2003070233 | A1 | 20030828 | WO 2003-US4561 | 20030214 |
| W: | | | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | |
| RW: | | | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | |
| CA 2475374 | AA | 20030828 | US 2002-357888P | P 20020219 |
| | | | CA 2003-2475374 | 20030214 |
| | | | US 2002-357888P | P 20020219 |
| | | | WO 2003-US4561 | W 20030214 |

| | | | | |
|---|----|----------|-----------------|------------|
| AU 2003211078 | A1 | 20030909 | AU 2003-211078 | 20030214 |
| | | | US 2002-357888P | P 20020219 |
| | | | WO 2003-US4561 | W 20030214 |
| EP 1476146 | A1 | 20041117 | EP 2003-742765 | 20030214 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| | | | US 2002-357888P | P 20020219 |
| | | | WO 2003-US4561 | W 20030214 |
| BR 2003007772 | A | 20041207 | BR 2003-7772 | 20030214 |
| | | | US 2002-357888P | P 20020219 |
| | | | WO 2003-US4561 | W 20030214 |
| CN 1633283 | A | 20050629 | CN 2003-804160 | 20030214 |
| | | | US 2002-357888P | P 20020219 |
| JP 2005526040 | T2 | 20050902 | JP 2003-569190 | 20030214 |
| | | | US 2002-357888P | P 20020219 |
| | | | WO 2003-US4561 | W 20030214 |
| US 2003191172 | A1 | 20031009 | US 2003-368091 | 20030218 |
| | | | US 2002-357888P | P 20020219 |

AB The invention provides a method for the use of a cyclooxygenase-2 inhibitor, alone or in combination with an antimuscarinic agent, for the treatment or prophylaxis of a urinary incontinence condition in a subject in need of such treatment or prevention, comprising administering to the subject an effective amount of the cyclooxygenase-2 inhibitor and, optionally, the antimuscarinic agent.

IT 124937-52-6, Tolterodine tartrate
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (cyclooxygenase inhibitors and antimuscarinic agents for treatment of incontinence)

RN 124937-52-6 CAPLUS

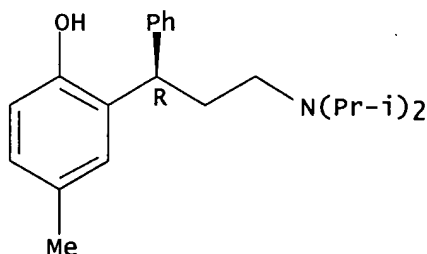
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

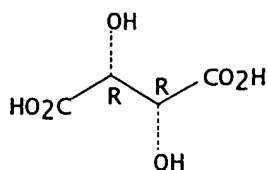
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

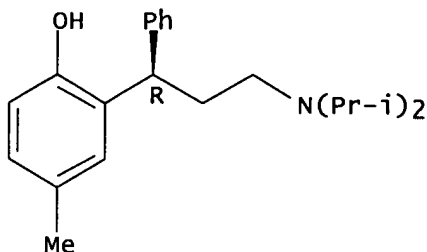
L11 ANSWER 55 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:652747 CAPLUS
DN 140:31465
TI Sustained-release preparation of tolterodine tartrate and preparing thereof
IN Cao, Deshan; Liu, Zhenghe
PA Meirui Pharmaceutical Co., Ltd., Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 10 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|----------------------------------|----------------------|
| PI | CN 1372923 | A | 20021009 | CN 2002-112512 CN 2002-112512 | 20020109 20020109 |
| AB | Tolterodine tartrate sustained-release preps. (such as granules, tablets, pills, or capsules) for treating bladder diseases is composed of tolterodine tartrate 1, C3-20 aliphatic carboxylic acid (such as tartaric acid, malic acid, succinic acid, glutaric acid, glutamic acid, maleic acid, mandelic acid, and/or citric acid) and/or alditol (such as mannitol, xylitol, lactose, or sucrose) 2-50, cellulose or its derivative (such as microcryst. cellulose, hydroxypropyl cellulose, hydroxypropyl Me cellulose, and/or Na CM-cellulose) 1-100, dextrin 2-50, polyvinylpyrrolidone 1-50, and lubricant (such as talc, stearic acid, or Mg stearate) 0.1-5 part. | | | | |
| IT | 124937-52-6, Tolterodine tartrate RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (sustained-release preparation of tolterodine tartrate) | | | | |
| RN | 124937-52-6 CAPLUS | | | | |
| CN | Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME) | | | | |

CM 1

CRN 124937-51-5
CMF C22 H31 N O

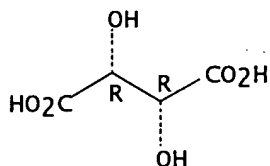
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 56 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2003:511139 CAPLUS
 DN 139:74052
 TI Controlled release dosage forms containing polymers
 IN Aldrich, Dale S.; Wald, Randy J.; Hlinak, Anthony J.; Bandyopadhyay, Rebanta; Coffey, Martin J.; Goll, Diane; Mazhary, Ahmad M.; Meury, Richard H.; Rohrs, Brian R.; Skoug, John W.; Secreast, Stephen L.; Stelzer, Dennis J.; White, Jackie G.
 PA Pharmacia Corporation, USA; et al.
 SO PCT Int. Appl., 30 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
|----|---|------|----------|--|------------|--|
| PI | WO 2003053428 | A1 | 20030703 | WO 2002-US41037 | 20021219 | |
| | W: | | | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | |
| | RW: | | | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | |
| | AU 2002360717 | A1 | 20030709 | US 2001-342650P | P 20011220 | |
| | | | | AU 2002-360717 | 20021219 | |
| | | | | US 2001-342650P | P 20011220 | |
| | US 2003152624 | A1 | 20030814 | WO 2002-US41037 | W 20021219 | |
| | | | | US 2002-325298 | 20021219 | |
| | | | | US 2001-342650P | P 20011220 | |
| AB | Controlled release pharmaceutical compns. comprising tolterodine and a polymer-based release-controlling component and processes for preparing such compns. are provided. The compns. are useful in the treatment of overactive bladder and similar conditions. Thus, a coated bead formulation comprised in the core sugar spheres 73.3%; the first layer contained Surelease E-7-19010 Clear 11.9, and water qs; the second layer comprised tolterodine L-tartrate 2.2, HPMC-2910 1.7%, and water qs; the third layer was composed of Surelease E-7-19010 8.5, HPMC-2910 1.4% and water qs; the 4th layer HPMC-2910 1.0%, and water qs (water removed during processing). | | | | | |
| IT | 124937-52-6 | | | | | |

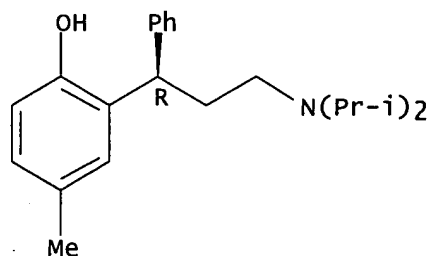
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(controlled release dosage forms containing polymers)

RN 124937-52-6 CAPLUS
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
(2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5
CMF C22 H31 N O

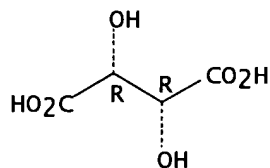
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 57 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:511071 CAPLUS
DN 139:47218
TI Vaginal delivery of drugs for the treatment of urogenital diseases
IN Dipiano, Gerianne Tringali; Ziemniak, John A.; Janicki, Thomas I.
PA Femmepharm, Inc., USA
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2

DT Patent
LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|----------|
| PI | WO 2003053292 | A1 | 20030703 | WO 2002-US40875 | 20021219 |
| | WO 2003053292 | B1 | 20040708 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, | | | | |

LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
 PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA,
 UG, UZ, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ,
 CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

| | | | | | |
|--|----|----------|-----------------|---|----------|
| CA 2471400 | AA | 20030703 | US 2001-342663P | P | 20011220 |
| | | | CA 2002-2471400 | | 20021219 |
| | | | US 2001-342663P | P | 20011220 |
| AU 2002366800 | A1 | 20030709 | WO 2002-US40875 | W | 20021219 |
| | | | AU 2002-366800 | | 20021219 |
| | | | US 2001-342663P | P | 20011220 |
| US 2003143278 | A1 | 20030731 | WO 2002-US40875 | W | 20021219 |
| | | | US 2002-324624 | | 20021219 |
| EP 1455697 | A1 | 20040915 | US 2001-342663P | P | 20011220 |
| | | | EP 2002-805642 | | 20021219 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK | | | US 2001-342663P | P | 20011220 |
| | | | WO 2002-US40875 | W | 20021219 |
| JP 2005513080 | T2 | 20050512 | JP 2003-554053 | | 20021219 |
| | | | US 2001-342663P | P | 20011220 |
| | | | WO 2002-US40875 | W | 20021219 |

AB Drug delivery compns. which are suitable for vaginal administration for the treatment of diseases and disorders in the urogenital tract are described. The compns. may be in the form of a tablet, liquid suspension or dispersion, dried powder, topical ointment, cream, foam, suppository, or aerosol. The drug delivery compns. are administered directly to the vagina and do not require the use of a solid device. This method of administration reduces the systemic levels of the drugs.

IT 124937-52-6, Tolterodine tartrate

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(vaginal delivery of drugs for treatment of urogenital diseases)

RN 124937-52-6 CAPLUS

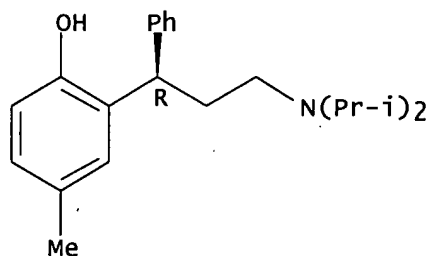
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

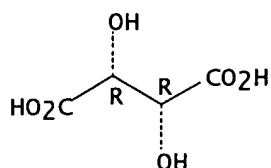


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 58 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:396255 CAPLUS
DN 138:406917
TI Buccal sprays or capsules containing drugs for treating disorders of the
gastrointestinal or urinary tracts
IN Dugger, Harry A., III
PA USA
SO U.S. Pat. Appl. Publ., 14 pp., Cont.-in-part of U.S. Ser. No. 537,118.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 19

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|-------------|
| PI US 2003095926 | A1 | 20030522 | US 2002-230085 | 20020829 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| WO 9916417 | A1 | 19990408 | WO 1997-US17899 | 19971001 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW | | | | |
| RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| EP 1029536 | A1 | 20000823 | EP 2000-109347 | 19971001 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| EP 1036561 | A1 | 20000920 | EP 1997-911621 | A3 19971001 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | EP 2000-109357 | 19971001 |
| CA 2497112 | AA | 20040311 | EP 1997-911621 | A3 19971001 |
| | | | CA 2003-2497112 | 20030827 |
| | | | US 2002-230085 | A 20020829 |
| | | | WO 2003-US26854 | W 20030827 |
| WO 2004019910 | A2 | 20040311 | WO 2003-US26854 | 20030827 |
| WO 2004019910 | A3 | 20040729 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, | | | | |

| | | | |
|---------------|----|----------|--|
| | | | KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG |
| AU 2003272242 | A1 | 20040319 | US 2002-230085 A 20020829 AU 2003-272242 20030827 US 2002-230085 A 20020829 WO 2003-US26854 W 20030827 EP 2003-754415 20030827 |
| EP 1534242 | A2 | 20050601 | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK US 2002-230085 A 20020829 WO 2003-US26854 W 20030827 |
| JP 2006506342 | T2 | 20060223 | JP 2004-531570 20030827 US 2002-230085 A 20020829 WO 2003-US26854 W 20030827 |
| US 2004136914 | A1 | 20040715 | US 2003-671717 20030929 WO 1997-US17899 A2 19971001 US 2000-537118 A2 20000329 US 2002-230085 A2 20020829 |
| US 2004136915 | A1 | 20040715 | US 2003-671719 20030929 WO 1997-US17899 A2 19971001 US 2000-537118 A2 20000329 US 2002-230085 A2 20020829 |
| US 2005025716 | A1 | 20050203 | US 2004-928996 20040827 WO 1997-US17899 A2 19971001 US 2000-537118 A2 20000329 US 2002-230085 A3 20020829 |
| US 2006198790 | A1 | 20060907 | US 2006-429953 20060509 WO 1997-US17899 A2 19971001 US 2000-537118 A2 20000329 US 2002-230085 A2 20020829 US 2003-671717 A3 20030929 |

PATENT FAMILY INFORMATION:

FAN 1999:233778

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|-------------|
| PI | WO 9916417 | A1 | 19990408 | WO 1997-US17899 | 19971001 |
| | W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW | | | | |
| | RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| | CA 2306024 | AA | 19990408 | CA 1997-2306024 | 19971001 |
| | | | | WO 1997-US17899 | A 19971001 |
| | AU 9748946 | A1 | 19990423 | AU 1997-48946 | 19971001 |
| | | | | WO 1997-US17899 | A 19971001 |
| | EP 1019019 | A1 | 20000719 | EP 1997-911621 | 19971001 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| | | | | EP 2000-109347 | A3 19971001 |
| | | | | WO 1997-US17899 | W 19971001 |
| | EP 1029536 | A1 | 20000823 | EP 2000-109347 | 19971001 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | | | | EP 1997-911621 | A3 19971001 |
| | EP 1036561 | A1 | 20000920 | EP 2000-109357 | 19971001 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |

| | | | | |
|---------------|----|----------|-----------------|-------------|
| JP 2001517689 | T2 | 20011009 | EP 1997-911621 | A3 19971001 |
| | | | JP 2000-513555 | 19971001 |
| US 2003039680 | A1 | 20030227 | WO 1997-US17899 | W 19971001 |
| US 6676931 | B2 | 20040113 | US 2002-100156 | 20020318 |
| | | | WO 1997-US17899 | A2 19971001 |
| US 2003077227 | A1 | 20030424 | US 2000-537118 | A3 20000329 |
| | | | US 2002-230060 | 20020829 |
| | | | WO 1997-US17899 | A2 19971001 |
| US 2003077228 | A1 | 20030424 | US 2000-537118 | A2 20000329 |
| | | | US 2002-230073 | 20020829 |
| | | | WO 1997-US17899 | A2 19971001 |
| US 2003077229 | A1 | 20030424 | US 2000-537118 | A2 20000329 |
| | | | US 2002-230075 | 20020829 |
| | | | WO 1997-US17899 | A2 19971001 |
| US 2003082107 | A1 | 20030501 | US 2000-537118 | A2 20000329 |
| | | | US 2002-230080 | 20020829 |
| | | | WO 1997-US17899 | A2 19971001 |
| US 2003095925 | A1 | 20030522 | US 2000-537118 | A2 20000329 |
| | | | US 2002-230084 | 20020829 |
| | | | WO 1997-US17899 | A2 19971001 |
| US 2003095926 | A1 | 20030522 | US 2000-537118 | A2 20000329 |
| | | | US 2002-230085 | 20020829 |
| | | | WO 1997-US17899 | A2 19971001 |
| US 2003095927 | A1 | 20030522 | US 2000-537118 | A2 20000329 |
| | | | US 2002-230086 | 20020829 |
| | | | WO 1997-US17899 | A2 19971001 |
| US 2003185761 | A1 | 20031002 | US 2000-537118 | A2 20000329 |
| | | | US 2002-230059 | 20020829 |
| | | | WO 1997-US17899 | A2 19971001 |
| US 2003190286 | A1 | 20031009 | US 2000-537118 | A2 20000329 |
| | | | US 2002-230072 | 20020829 |
| | | | WO 1997-US17899 | A2 19971001 |
| US 2003211047 | A1 | 20031113 | US 2000-537118 | A2 20000329 |
| US 6998110 | B2 | 20060214 | US 2002-327195 | 20021224 |
| | | | WO 1997-US17899 | A2 19971001 |
| US 2004062716 | A1 | 20040401 | US 2000-537118 | A3 20000329 |
| | | | US 2003-663817 | 20030917 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A3 20000329 |
| US 2004136913 | A1 | 20040715 | US 2002-100156 | A1 20020318 |
| | | | US 2003-671710 | 20030929 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| US 2004136914 | A1 | 20040715 | US 2002-230059 | A2 20020829 |
| | | | US 2003-671717 | 20030929 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| US 2004136915 | A1 | 20040715 | US 2002-230085 | A2 20020829 |
| | | | US 2003-671719 | 20030929 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| US 2004141923 | A1 | 20040722 | US 2002-230085 | A2 20020829 |
| | | | US 2003-671720 | 20030929 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| US 2004265239 | A1 | 20041230 | US 2002-230060 | A2 20020829 |
| | | | US 2003-671715 | 20030929 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |

| | | | | |
|---------------|----|----------|-----------------|-------------|
| US 2005163719 | A1 | 20050728 | US 2002-230060 | A2 20020829 |
| | | | US 2003-671709 | 20030929 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| US 2005180923 | A1 | 20050818 | US 2002-230060 | A2 20020829 |
| | | | US 2003-671708 | 20030929 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| US 2004120895 | A1 | 20040624 | US 2002-230073 | A2 20020829 |
| US 6977070 | B2 | 20051220 | US 2003-726585 | 20031204 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A3 20020829 |
| US 2004120896 | A1 | 20040624 | US 2003-726625 | 20031204 |
| US 6969508 | B2 | 20051129 | | |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230059 | A3 20020829 |
| US 2005002867 | A1 | 20050106 | US 2004-834815 | 20040427 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A2 20020829 |
| US 2005025712 | A1 | 20050203 | US 2004-928952 | 20040827 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230072 | A3 20020829 |
| US 2005025713 | A1 | 20050203 | US 2004-928979 | 20040827 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230075 | A3 20020829 |
| US 2005025714 | A1 | 20050203 | US 2004-928989 | 20040827 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230084 | A3 20020829 |
| US 2005025715 | A1 | 20050203 | US 2004-928995 | 20040827 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230073 | A3 20020829 |
| US 2005025716 | A1 | 20050203 | US 2004-928996 | 20040827 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230085 | A3 20020829 |
| US 2005025717 | A1 | 20050203 | US 2004-928997 | 20040827 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230086 | A3 20020829 |
| US 2005142069 | A1 | 20050630 | US 2004-929001 | 20040827 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230080 | A3 20020829 |
| US 2005281752 | A1 | 20051222 | US 2005-211488 | 20050826 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2003-726585 | A1 20031204 |
| US 2005281753 | A1 | 20051222 | US 2005-211549 | 20050826 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-327195 | A1 20021224 |
| US 2005287075 | A1 | 20051229 | US 2005-211487 | 20050826 |
| | | | WO 1997-US17899 | A2 19971001 |

| | | | | |
|------------------|------|----------|---|-------------|
| US 2006165604 | A1 | 20060727 | US 2000-537118 | A2 20000329 |
| | | | US 2003-726625 | A1 20031204 |
| | | | US 2006-366663 | 20060303 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230059 | A2 20020829 |
| | | | US 2003-671710 | A3 20030929 |
| US 2006159624 | A1 | 20060720 | US 2006-384444 | 20060321 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A2 20020829 |
| | | | US 2003-671715 | A3 20030929 |
| US 2006171896 | A1 | 20060803 | US 2006-391297 | 20060329 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A2 20020829 |
| | | | US 2003-671720 | A3 20030929 |
| US 2006198790 | A1 | 20060907 | US 2006-429953 | 20060509 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230085 | A2 20020829 |
| | | | US 2003-671717 | A3 20030929 |
| US 2006210484 | A1 | 20060921 | US 2006-440095 | 20060525 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230073 | A2 20020829 |
| | | | US 2003-671708 | A3 20030929 |
| US 2006222597 | A1 | 20061005 | US 2006-442137 | 20060530 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A2 20020829 |
| | | | US 2004-834815 | A3 20040427 |
| US 2006216240 | A1 | 20060928 | US 2006-443253 | 20060531 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A2 20020829 |
| | | | US 2003-671715 | A3 20030929 |
| US 2006216241 | A1 | 20060928 | US 2006-443254 | 20060531 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A2 20020829 |
| | | | US 2003-671709 | A3 20030929 |
| FAN 2003:319255 | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| ----- | ---- | ----- | ----- | ----- |
| PI US 2003077227 | A1 | 20030424 | US 2002-230060 | 20020829 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| WO 9916417 | A1 | 19990408 | WO 1997-US17899 | 19971001 |
| W: | | | AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, | |
| | | | DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, | |
| | | | LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, | |
| | | | PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, | |
| | | | UZ, VN, YU, ZW | |
| RW: | | | GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, | |
| | | | GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, | |
| | | | GN, ML, MR, NE, SN, TD, TG | |
| EP 1029536 | A1 | 20000823 | EP 2000-109347 | 19971001 |
| R: | | | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, | |
| | | | IE, SI, LT, LV, FI, RO | |
| | | | EP 1997-911621 | A3 19971001 |

| | | | | |
|---|----|----------|-----------------|-------------|
| EP 1036561 | A1 | 20000920 | EP 2000-109357 | 19971001 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| CA 2497262 | AA | 20040429 | EP 1997-911621 | A3 19971001 |
| | | | CA 2003-2497262 | 20030827 |
| | | | US 2002-230060 | A 20020829 |
| | | | WO 2003-US26847 | W 20030827 |
| WO 2004035021 | A2 | 20040429 | WO 2003-US26847 | 20030827 |
| WO 2004035021 | A3 | 20041111 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2003298564 | A1 | 20040504 | US 2002-230060 | A 20020829 |
| | | | AU 2003-298564 | 20030827 |
| | | | US 2002-230060 | A 20020829 |
| | | | WO 2003-US26847 | W 20030827 |
| EP 1539106 | A2 | 20050615 | EP 2003-796314 | 20030827 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| | | | US 2002-230060 | A 20020829 |
| | | | WO 2003-US26847 | W 20030827 |
| JP 2006505569 | T2 | 20060216 | JP 2004-545251 | 20030827 |
| | | | US 2002-230060 | A 20020829 |
| | | | WO 2003-US26847 | W 20030827 |
| US 2004141923 | A1 | 20040722 | US 2003-671720 | 20030929 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A2 20020829 |
| US 2004265239 | A1 | 20041230 | US 2003-671715 | 20030929 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A2 20020829 |
| US 2005163719 | A1 | 20050728 | US 2003-671709 | 20030929 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A2 20020829 |
| US 2004120895 | A1 | 20040624 | US 2003-726585 | 20031204 |
| US 6977070 | B2 | 20051220 | | |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A3 20020829 |
| US 2005002867 | A1 | 20050106 | US 2004-834815 | 20040427 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A2 20020829 |
| US 2006159624 | A1 | 20060720 | US 2006-384444 | 20060321 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A2 20020829 |
| | | | US 2003-671715 | A3 20030929 |
| US 2006171896 | A1 | 20060803 | US 2006-391297 | 20060329 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A2 20020829 |

| | | | | |
|---|------|----------|-----------------|-------------|
| US 2006222597 | A1 | 20061005 | US 2003-671720 | A3 20030929 |
| | | | US 2006-442137 | 20060530 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A2 20020829 |
| | | | US 2004-834815 | A3 20040427 |
| US 2006216240 | A1 | 20060928 | US 2006-443253 | 20060531 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A2 20020829 |
| | | | US 2003-671715 | A3 20030929 |
| US 2006216241 | A1 | 20060928 | US 2006-443254 | 20060531 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A2 20020829 |
| | | | US 2003-671709 | A3 20030929 |
| FAN 2003:319256 | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| ----- | ---- | ----- | ----- | ----- |
| PI US 2003077228 | A1 | 20030424 | US 2002-230073 | 20020829 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| WO 9916417 | A1 | 19990408 | WO 1997-US17899 | 19971001 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW | | | | |
| RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| EP 1029536 | A1 | 20000823 | EP 2000-109347 | 19971001 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | | | EP 1997-911621 | A3 19971001 |
| EP 1036561 | A1 | 20000920 | EP 2000-109357 | 19971001 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | | | EP 1997-911621 | A3 19971001 |
| WO 2004019911 | A2 | 20040311 | WO 2003-US26857 | 20030827 |
| WO 2004019911 | A3 | 20040715 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | US 2002-230073 | A 20020829 |
| AU 2003270017 | A1 | 20040319 | AU 2003-270017 | 20030827 |
| | | | US 2002-230073 | A 20020829 |
| | | | WO 2003-US26857 | W 20030827 |
| US 2005180923 | A1 | 20050818 | US 2003-671708 | 20030929 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230073 | A2 20020829 |
| US 2005025715 | A1 | 20050203 | US 2004-928995 | 20040827 |
| | | | WO 1997-US17899 | A2 19971001 |

| | | | | |
|---|-------|----------|-----------------|-------------|
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230073 | A3 20020829 |
| US 2006210484 | A1 | 20060921 | US 2006-440095 | 20060525 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230073 | A2 20020829 |
| | | | US 2003-671708 | A3 20030929 |
| FAN 2003:319257 | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| ----- | ----- | ----- | ----- | ----- |
| PI US 2003077229 | A1 | 20030424 | US 2002-230075 | 20020829 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| WO 9916417 | A1 | 19990408 | WO 1997-US17899 | 19971001 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW | | | | |
| RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| EP 1029536 | A1 | 20000823 | EP 2000-109347 | 19971001 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | | | EP 1997-911621 | A3 19971001 |
| EP 1036561 | A1 | 20000920 | EP 2000-109357 | 19971001 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | | | EP 1997-911621 | A3 19971001 |
| CA 2496769 | AA | 20040311 | CA 2003-2496769 | 20030827 |
| | | | US 2002-230075 | A 20020829 |
| | | | WO 2003-US26853 | W 20030827 |
| WO 2004019909 | A2 | 20040311 | WO 2003-US26853 | 20030827 |
| WO 2004019909 | A3 | 20040708 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | US 2002-230075 | A 20020829 |
| AU 2003270014 | A1 | 20040319 | AU 2003-270014 | 20030827 |
| | | | US 2002-230075 | A 20020829 |
| | | | WO 2003-US26853 | W 20030827 |
| EP 1536769 | A2 | 20050608 | EP 2003-751909 | 20030827 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| | | | US 2002-230075 | A 20020829 |
| | | | WO 2003-US26853 | W 20030827 |
| JP 2006502147 | T2 | 20060119 | JP 2004-531569 | 20030827 |
| | | | US 2002-230075 | A 20020829 |
| | | | WO 2003-US26853 | W 20030827 |
| US 2005025713 | A1 | 20050203 | US 2004-928979 | 20040827 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230075 | A3 20020829 |

| FAN | 2003:334375 | | | | |
|-----|---|------|----------|-----------------|-------------|
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| PI | US 2003082107 | A1 | 20030501 | US 2002-230080 | 20020829 |
| | | | | WO 1997-US17899 | A2 19971001 |
| | | | | US 2000-537118 | A2 20000329 |
| | WO 9916417 | A1 | 19990408 | WO 1997-US17899 | 19971001 |
| | W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW | | | | |
| | RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| | EP 1029536 | A1 | 20000823 | EP 2000-109347 | 19971001 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | | | | EP 1997-911621 | A3 19971001 |
| | EP 1036561 | A1 | 20000920 | EP 2000-109357 | 19971001 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | | | | EP 1997-911621 | A3 19971001 |
| | CA 2497136 | AA | 20040311 | CA 2003-2497136 | 20030827 |
| | | | | US 2002-230080 | A 20020829 |
| | | | | WO 2003-US26860 | W 20030827 |
| | WO 2004019912 | A2 | 20040311 | WO 2003-US26860 | 20030827 |
| | WO 2004019912 | A3 | 20040819 | | |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | US 2002-230080 | A 20020829 |
| | AU 2003262917 | A1 | 20040319 | AU 2003-262917 | 20030827 |
| | | | | US 2002-230080 | A 20020829 |
| | | | | WO 2003-US26860 | W 20030827 |
| | EP 1545458 | A2 | 20050629 | EP 2003-791859 | 20030827 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| | | | | US 2002-230080 | A 20020829 |
| | | | | WO 2003-US26860 | W 20030827 |
| | JP 2006502150 | T2 | 20060119 | JP 2004-531575 | 20030827 |
| | | | | US 2002-230080 | A 20020829 |
| | | | | WO 2003-US26860 | W 20030827 |
| | US 2005142069 | A1 | 20050630 | US 2004-929001 | 20040827 |
| | | | | WO 1997-US17899 | A2 19971001 |
| | | | | US 2000-537118 | A2 20000329 |
| | | | | US 2002-230080 | A3 20020829 |
| FAN | 2003:396254 | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| PI | US 2003095925 | A1 | 20030522 | US 2002-230084 | 20020829 |
| | | | | WO 1997-US17899 | A2 19971001 |
| | | | | US 2000-537118 | A2 20000329 |
| | WO 9916417 | A1 | 19990408 | WO 1997-US17899 | 19971001 |

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW
 RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
 EP 1029536 A1 20000823 EP 2000-109347 19971001
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
 EP 1036561 A1 20000920 EP 1997-911621 A3 19971001
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
 CA 2497114 AA 20040311 EP 1997-911621 A3 19971001
 CA 2003-2497114 20030827
 US 2002-230084 A 20020829
 WO 2003-US26855 W 20030827
 WO 2003-US26855 20030827
 WO 2004019903 A1 20040311
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
 AU 2003262916 A1 20040319 US 2002-230084 A 20020829
 AU 2003-262916 20030827
 US 2002-230084 A 20020829
 WO 2003-US26855 W 20030827
 EP 1549290 A1 20050706 EP 2003-791858 20030827
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
 US 2002-230084 A 20020829
 WO 2003-US26855 W 20030827
 JP 2006502148 T2 20060119 JP 2004-531571 20030827
 US 2002-230084 A 20020829
 WO 2003-US26855 W 20030827
 US 2005025714 A1 20050203 US 2004-928989 20040827
 WO 1997-US17899 A2 19971001
 US 2000-537118 A2 20000329
 US 2002-230084 A3 20020829
 FAN 2003:396256
 PATENT NO. KIND DATE APPLICATION NO. DATE

 PI US 2003095927 A1 20030522 US 2002-230086 20020829
 WO 1997-US17899 A2 19971001
 US 2000-537118 A2 20000329
 WO 9916417 A1 19990408 WO 1997-US17899 19971001
 W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW
 RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

| | | | | |
|---|-------|----------|-----------------|-------------|
| EP 1029536 | A1 | 20000823 | EP 2000-109347 | 19971001 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| EP 1036561 | A1 | 20000920 | EP 1997-911621 | A3 19971001 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| CA 2497121 | AA | 20040311 | EP 1997-911621 | A3 19971001 |
| CA 2003-2497121 20030827 | | | | |
| US 2002-230086 A 20020829 | | | | |
| WO 2003-US26858 W 20030827 | | | | |
| WO 2004019905 | A1 | 20040311 | WO 2003-US26858 | 20030827 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2003270018 | A1 | 20040319 | US 2002-230086 | A 20020829 |
| AU 2003-270018 20030827 | | | | |
| US 2002-230086 A 20020829 | | | | |
| WO 2003-US26858 W 20030827 | | | | |
| EP 1534236 | A1 | 20050601 | EP 2003-751912 | 20030827 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| US 2002-230086 A 20020829 | | | | |
| WO 2003-US26858 W 20030827 | | | | |
| JP 2006508052 | T2 | 20060309 | JP 2004-531574 | 20030827 |
| US 2002-230086 A 20020829 | | | | |
| WO 2003-US26858 W 20030827 | | | | |
| US 2005025717 | A1 | 20050203 | US 2004-928997 | 20040827 |
| WO 1997-US17899 A2 19971001 | | | | |
| US 2000-537118 A2 20000329 | | | | |
| US 2002-230086 A3 20020829 | | | | |
| FAN 2003:777091 | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| ----- | ----- | ----- | ----- | ----- |
| PI US 2003185761 | A1 | 20031002 | US 2002-230059 | 20020829 |
| WO 1997-US17899 A2 19971001 | | | | |
| US 2000-537118 A2 20000329 | | | | |
| WO 9916417 | A1 | 19990408 | WO 1997-US17899 | 19971001 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW | | | | |
| RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| EP 1029536 | A1 | 20000823 | EP 2000-109347 | 19971001 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| EP 1036561 | A1 | 20000920 | EP 1997-911621 | A3 19971001 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| EP 2000-109357 19971001 | | | | |
| EP 1997-911621 A3 19971001 | | | | |

| | | | | |
|------------------|--|----------|-----------------|-------------|
| CA 2497268 | AA | 20040527 | CA 2003-2497268 | 20030827 |
| | | | US 2002-230059 | A 20020829 |
| WO 2004043428 | A2 | 20040527 | WO 2003-US26859 | W 20030827 |
| WO 2004043428 | A3 | 20041021 | WO 2003-US26859 | 20030827 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| AU 2003296899 | A1 | 20040603 | US 2002-230059 | A 20020829 |
| | | | AU 2003-296899 | 20030827 |
| | | | US 2002-230059 | A 20020829 |
| | | | WO 2003-US26859 | W 20030827 |
| EP 1539107 | A2 | 20050615 | EP 2003-811212 | 20030827 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | |
| | | | US 2002-230059 | A 20020829 |
| | | | WO 2003-US26859 | W 20030827 |
| JP 2006505611 | T2 | 20060216 | JP 2004-551444 | 20030827 |
| | | | US 2002-230059 | A 20020829 |
| | | | WO 2003-US26859 | W 20030827 |
| US 2004136913 | A1 | 20040715 | US 2003-671710 | 20030929 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230059 | A2 20020829 |
| US 2004120896 | A1 | 20040624 | US 2003-726625 | 20031204 |
| US 6969508 | B2 | 20051129 | | |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230059 | A3 20020829 |
| US 2006165604 | A1 | 20060727 | US 2006-366663 | 20060303 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230059 | A2 20020829 |
| | | | US 2003-671710 | A3 20030929 |
| FAN 2003:796097 | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| ----- | ----- | ----- | ----- | ----- |
| PI US 2003190286 | A1 | 20031009 | US 2002-230072 | 20020829 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| WO 9916417 | A1 | 19990408 | WO 1997-US17899 | 19971001 |
| W: | AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW | | | |
| RW: | GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | |
| EP 1029536 | A1 | 20000823 | EP 2000-109347 | 19971001 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | |
| | | | EP 1997-911621 | A3 19971001 |
| EP 1036561 | A1 | 20000920 | EP 2000-109357 | 19971001 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

CA 2497116 AA 20040311 EP 1997-911621 A3 19971001
CA 2003-2497116 20030827
US 2002-230072 A 20020829
WO 2003-US26856 W 20030827
WO 2003-US26856 20030827

WO 2004019904 A1 20040311 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003270016 A1 20040319 US 2002-230072 A 20020829
AU 2003-270016 20030827
US 2002-230072 A 20020829
WO 2003-US26856 W 20030827

EP 1539097 A1 20050615 EP 2003-751910 20030827
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
US 2002-230072 A 20020829
WO 2003-US26856 W 20030827

JP 2006502149 T2 20060119 JP 2004-531572 20030827
US 2002-230072 A 20020829
WO 2003-US26856 W 20030827

US 2005025712 A1 20050203 US 2004-928952 20040827
WO 1997-US17899 A2 19971001
US 2000-537118 A2 20000329
US 2002-230072 A3 20020829

FAN 2004:569658
PATENT NO. KIND DATE APPLICATION NO. DATE

PI US 2004136913 A1 20040715 US 2003-671710 20030929
WO 1997-US17899 A2 19971001
US 2000-537118 A2 20000329
US 2002-230059 A2 20020829
WO 9916417 A1 19990408 WO 1997-US17899 19971001
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

EP 1029536 A1 20000823 EP 2000-109347 19971001
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

EP 1036561 A1 20000920 EP 1997-911621 A3 19971001
EP 2000-109357 19971001
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

US 2003185761 A1 20031002 EP 1997-911621 A3 19971001
US 2002-230059 20020829
WO 1997-US17899 A2 19971001
US 2000-537118 A2 20000329

WO 2005032518 A1 20050414 WO 2004-US31799 20040927

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2003-671710 A 20030929
 EP 1675567 A1 20060705 EP 2004-789151 20040927
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

US 2003-671710 A 20030929
 WO 2004-US31799 W 20040927
 US 2006-366663 20060303
 WO 1997-US17899 A2 19971001
 US 2000-537118 A2 20000329
 US 2002-230059 A2 20020829
 US 2003-671710 A3 20030929

FAN 2004:569659
 PATENT NO. KIND DATE APPLICATION NO. DATE

PI US 2004136914 A1 20040715 US 2003-671717 20030929
 WO 1997-US17899 A2 19971001
 US 2000-537118 A2 20000329
 US 2002-230085 A2 20020829

WO 9916417 A1 19990408 WO 1997-US17899 19971001

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW

RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

EP 1029536 A1 20000823 EP 2000-109347 19971001
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

EP 1036561 A1 20000920 EP 1997-911621 A3 19971001
 EP 2000-109357 19971001
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

US 2003095926 A1 20030522 EP 1997-911621 A3 19971001
 US 2002-230085 20020829
 WO 1997-US17899 A2 19971001
 US 2000-537118 A2 20000329

CA 2554954 AA 20050414 CA 2004-2554954 20040927
 US 2003-671717 A 20030929
 WO 2004-US31801 W 20040927

WO 2005032520 A1 20050414 WO 2004-US31801 20040927

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,

EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1682090 A1 20060726 US 2003-671717 A 20030929
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, EP 2004-789153 20040927
 IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

US 2006198790 A1 20060907 US 2003-671717 A 20030929
 WO 2004-US31801 W 20040927
 US 2006-429953 20060509
 WO 1997-US17899 A2 19971001
 US 2000-537118 A2 20000329
 US 2002-230085 A2 20020829
 US 2003-671717 A3 20030929

FAN 2004:569660
 PATENT NO. KIND DATE APPLICATION NO. DATE

PI US 2004136915 A1 20040715 US 2003-671719 20030929
 WO 1997-US17899 A2 19971001
 US 2000-537118 A2 20000329
 US 2002-230085 A2 20020829

WO 9916417 A1 19990408 WO 1997-US17899 19971001
 W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW
 RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

EP 1029536 A1 20000823 EP 2000-109347 19971001
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

EP 1036561 A1 20000920 EP 1997-911621 A3 19971001
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, EP 2000-109357 19971001
 IE, SI, LT, LV, FI, RO

US 2003095926 A1 20030522 EP 1997-911621 A3 19971001
 US 2002-230085 20020829
 WO 1997-US17899 A2 19971001
 US 2000-537118 A2 20000329

FAN 2004:589015
 PATENT NO. KIND DATE APPLICATION NO. DATE

PI US 2004141923 A1 20040722 US 2003-671720 20030929
 WO 1997-US17899 A2 19971001
 US 2000-537118 A2 20000329
 US 2002-230060 A2 20020829

WO 9916417 A1 19990408 WO 1997-US17899 19971001
 W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW
 RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

EP 1029536 A1 20000823 EP 2000-109347 19971001
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

EP 1997-911621 A3 19971001

| | | | | |
|---|------|----------|-----------------|-------------|
| EP 1036561 | A1 | 20000920 | EP 2000-109357 | 19971001 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| US 2003077227 | A1 | 20030424 | EP 1997-911621 | A3 19971001 |
| | | | US 2002-230060 | 20020829 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| WO 2005030167 | A2 | 20050407 | WO 2004-US31797 | 20040927 |
| WO 2005030167 | A3 | 20060413 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| EP 1696876 | A2 | 20060906 | US 2003-671720 | A 20030929 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR | | | EP 2004-809814 | 20040927 |
| | | | US 2003-671720 | A 20030929 |
| | | | WO 2004-US31797 | W 20040927 |
| US 2006171896 | A1 | 20060803 | US 2006-391297 | 20060329 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A2 20020829 |
| | | | US 2003-671720 | A3 20030929 |
| FAN 2005:1864 | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| ----- | ---- | ----- | ----- | ----- |
| PI US 2004265239 | A1 | 20041230 | US 2003-671715 | 20030929 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| | | | US 2002-230060 | A2 20020829 |
| WO 9916417 | A1 | 19990408 | WO 1997-US17899 | 19971001 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW | | | | |
| RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| EP 1029536 | A1 | 20000823 | EP 2000-109347 | 19971001 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| EP 1036561 | A1 | 20000920 | EP 1997-911621 | A3 19971001 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | EP 2000-109357 | 19971001 |
| US 2003077227 | A1 | 20030424 | EP 1997-911621 | A3 19971001 |
| | | | US 2002-230060 | 20020829 |
| | | | WO 1997-US17899 | A2 19971001 |
| | | | US 2000-537118 | A2 20000329 |
| WO 2005032519 | A1 | 20050414 | WO 2004-US31800 | 20040927 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, | | | | |

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1675568 A1 20060705 US 2003-671715 A 20030929
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
 US 2003-671715 A 20030929
 WO 2004-US31800 W 20040927
 US 2006159624 A1 20060720 US 2006-384444 20060321
 WO 1997-US17899 A2 19971001
 US 2000-537118 A2 20000329
 US 2002-230060 A2 20020829
 US 2003-671715 A3 20030929
 US 2006216240 A1 20060928 US 2006-443253 20060531
 WO 1997-US17899 A2 19971001
 US 2000-537118 A2 20000329
 US 2002-230060 A2 20020829
 US 2003-671715 A3 20030929

FAN 2005:15772
 PATENT NO. KIND DATE APPLICATION NO. DATE

 PI US 2005002867 A1 20050106 US 2004-834815 20040427
 WO 1997-US17899 A2 19971001
 US 2000-537118 A2 20000329
 US 2002-230060 A2 20020829
 WO 9916417 A1 19990408 WO 1997-US17899 19971001
 W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW
 RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

EP 1029536 A1 20000823 EP 2000-109347 19971001
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
 EP 1997-911621 A3 19971001
 EP 1036561 A1 20000920 EP 2000-109357 19971001
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
 EP 1997-911621 A3 19971001
 US 2003077227 A1 20030424 US 2002-230060 20020829
 WO 1997-US17899 A2 19971001
 US 2000-537118 A2 20000329
 WO 2005105042 A1 20051110 WO 2005-US14309 20050426
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,

AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
 MR, NE, SN, TD, TG

US 2006222597 A1 20061005 US 2004-834815 A 20040427
 US 2006-442137 20060530
 WO 1997-US17899 A2 19971001
 US 2000-537118 A2 20000329
 US 2002-230060 A2 20020829
 US 2004-834815 A3 20040427

FAN 2005:316336
 PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

PI WO 2005032517 A1 20050414 WO 2004-US31798 20040927
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
 SN, TD, TG

EP 1029536 A1 20000823 US 2003-671709 A 20030929
 EP 2000-109347 19971001
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO

EP 1036561 A1 20000920 EP 1997-911621 A3 19971001
 EP 2000-109357 19971001
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO

US 2005163719 A1 20050728 EP 1997-911621 A3 19971001
 US 2003-671709 20030929
 WO 1997-US17899 A2 19971001
 US 2000-537118 A2 20000329
 US 2002-230060 A2 20020829
 EP 1675566 A1 20060705 EP 2004-789150 20040927
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
 US 2003-671709 A 20030929
 WO 2004-US31798 W 20040927

FAN 2005:672592
 PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

PI US 2005163719 A1 20050728 US 2003-671709 20030929
 WO 1997-US17899 A2 19971001
 US 2000-537118 A2 20000329
 US 2002-230060 A2 20020829
 WO 9916417 A1 19990408 WO 1997-US17899 19971001
 W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
 DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ,
 LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL,
 PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US,
 UZ, VN, YU, ZW
 RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR,
 GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA,
 GN, ML, MR, NE, SN, TD, TG
 EP 1029536 A1 20000823 EP 2000-109347 19971001
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

| | | | | | |
|---|------|----------|-----------------|----------------|-------------|
| IE, SI, LT, LV, FI, RO | | | | EP 1997-911621 | A3 19971001 |
| EP 1036561 | A1 | 20000920 | EP 2000-109357 | 19971001 | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | | |
| US 2003077227 | A1 | 20030424 | EP 1997-911621 | A3 19971001 | |
| | | | US 2002-230060 | 20020829 | |
| | | | WO 1997-US17899 | A2 19971001 | |
| | | | US 2000-537118 | A2 20000329 | |
| WO 2005032517 | A1 | 20050414 | WO 2004-US31798 | 20040927 | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | | |
| EP 1675566 | A1 | 20060705 | US 2003-671709 | A 20030929 | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK | | | | | |
| | | | US 2003-671709 | A 20030929 | |
| | | | WO 2004-US31798 | W 20040927 | |
| US 2006216241 | A1 | 20060928 | US 2006-443254 | 20060531 | |
| | | | WO 1997-US17899 | A2 19971001 | |
| | | | US 2000-537118 | A2 20000329 | |
| | | | US 2002-230060 | A2 20020829 | |
| | | | US 2003-671709 | A3 20030929 | |
| FAN 2005:823127 | | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
| ----- | ---- | ----- | ----- | ----- | |
| PI US 2005180923 | A1 | 20050818 | US 2003-671708 | 20030929 | |
| | | | WO 1997-US17899 | A2 19971001 | |
| | | | US 2000-537118 | A2 20000329 | |
| | | | US 2002-230073 | A2 20020829 | |
| WO 9916417 | A1 | 19990408 | WO 1997-US17899 | 19971001 | |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW | | | | | |
| RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | | |
| EP 1029536 | A1 | 20000823 | EP 2000-109347 | 19971001 | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | | |
| EP 1036561 | A1 | 20000920 | EP 1997-911621 | A3 19971001 | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | | |
| US 2003077228 | A1 | 20030424 | EP 1997-911621 | A3 19971001 | |
| | | | US 2002-230073 | 20020829 | |
| | | | WO 1997-US17899 | A2 19971001 | |
| | | | US 2000-537118 | A2 20000329 | |
| US 2006210484 | A1 | 20060921 | US 2006-440095 | 20060525 | |
| | | | WO 1997-US17899 | A2 19971001 | |

US 2000-537118 A2 20000329
 US 2002-230073 A2 20020829
 US 2003-671708 A3 20030929

AB Buccal aerosol sprays or capsules using polar and non-polar solvent have now been developed which provide biol. active compds. for rapid absorption through the oral mucosa, resulting in fast onset of effect. The buccal polar compns. of the invention comprise formulation I: aqueous polar solvent, active compound, and optional flavoring agent; formulation II: aqueous polar solvent, active compound, optionally flavoring agent, and propellant; formulation III: non-polar solvent, active compound, and optional flavoring agent; and formulation IV: non-polar solvent, active compound, optional flavoring agent, and propellant. A lingual spray contained famotidine 7-20, water 5-10, L-aspartic acid 5-10, polyethylene glycol 50-85, and flavors 2-5%.

IT 124937-52-6, Detro1

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (buccal sprays or capsules containing drugs for treating disorders of gastrointestinal or urinary tracts)

RN 124937-52-6 CAPLUS

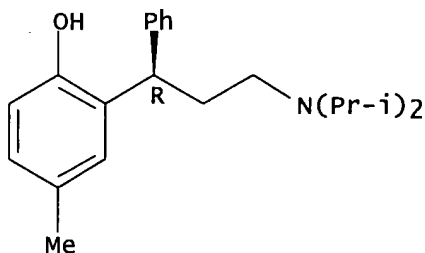
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

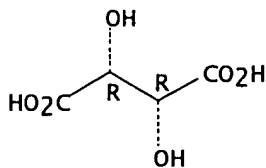


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 59 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:376645 CAPLUS

DN 138:374201

TI Compositions for treatment of postmenopausal female sexual dysfunction

IN Bilkey, Chris R.; Slatter, Greg J.; Versi, Ebrahim
 PA Pharmacia Corporation, USA
 SO PCT Int. Appl., 26 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|------------|
| PI | WO 2003039553 | A1 | 20030515 | WO 2002-US36167 | 20021112 |
| | WO 2003039553 | B1 | 20040708 | | |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | US 2003118633 | A1 | 20030626 | US 2001-344507P | P 20011109 |
| | | | | US 2002-289903 | 20021107 |
| | CA 2464707 | AA | 20030509 | US 2001-344507P | P 20011109 |
| | | | | CA 2002-2464707 | 20021112 |
| | | | | US 2001-344507P | P 20011109 |
| | US 2003130244 | A1 | 20030710 | WO 2002-US36167 | W 20021112 |
| | | | | US 2002-292742 | 20021112 |
| | EP 1443939 | A1 | 20040811 | US 2001-344507P | P 20011109 |
| | | | | EP 2002-789581 | 20021112 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK | | | | |
| | | | | US 2001-344507P | P 20011109 |
| | JP 2005514345 | T2 | 20050519 | WO 2002-US36167 | W 20021112 |
| | | | | JP 2003-541844 | 20021112 |
| | | | | US 2001-344507P | P 20011109 |
| | | | | WO 2002-US36167 | W 20021112 |

PATENT FAMILY INFORMATION:

FAN 2003:376618

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|------------|
| PI | WO 2003039524 | A1 | 20030515 | WO 2002-SE2041 | 20021107 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | CA 2466336 | AA | 20030515 | US 2001-344507P | P 20011109 |
| | | | | CA 2002-2466336 | 20021107 |
| | | | | US 2001-344507P | P 20011109 |
| | US 2003118633 | A1 | 20030626 | WO 2002-SE2041 | W 20021107 |
| | | | | US 2002-289903 | 20021107 |
| | EP 1441707 | A1 | 20040804 | US 2001-344507P | P 20011109 |
| | | | | EP 2002-783937 | 20021107 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, | | | | |

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

| | | | | | |
|---------------|----|----------|-----------------|---|----------|
| | | | US 2001-344507P | P | 20011109 |
| | | | WO 2002-SE2041 | W | 20021107 |
| JP 2005512995 | T2 | 20050512 | JP 2003-541815 | | 20021107 |
| | | | US 2001-344507P | P | 20011109 |
| | | | WO 2002-SE2041 | W | 20021107 |
| US 2003130244 | A1 | 20030710 | US 2002-292742 | | 20021112 |
| | | | US 2001-344507P | P | 20011109 |

AB A set of pharmaceutical dosage forms is provided, each comprising at least two therapeutic agents selected from (a) an estrogen, (b) an androgen, and (c) an antimuscarinic, in total and relative dosage amts. that are therapeutically effective in treatment of female sexual dysfunction (FSD) or postmenopausal sexual avoidance (PMSA), the dosage forms being adapted for intravaginal administration. A method of treatment of FSD or PMSA comprises administering intravaginally, in a treatment regimen extending over a period of at least 7 days, dosage forms at least a portion of which comprise two or more therapeutic agents selected from (a) an estrogen, (b) an androgen, and (c) an antimuscarinic, in total and relative dosage amts. that are therapeutically effective in treatment of FSD or PMSA, wherein no more than one dosage form is administered on any day. Also provided is a kit useful in implementing such a treatment regimen. For example, a vaginal tablet was formulated containing 25 g estradiol, 1 mg methyltestosterone, and 2 mg tolterodine tartrate, useful as part of a treatment regimen for PMSA. The estradiol was delivered primarily locally for relief of vaginal dryness, soreness and/or irritation. The methyltestosterone was delivered systematically to increase libido. The tolterodine tartrate was delivered systematically to control urinary incontinence and thereby remove a source of anxiety contributing to PMSA.

IT 124937-52-6, Tolterodine tartrate

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(vaginal comps. containing androgen, estrogen, and antimuscarinic for treatment of postmenopausal sexual dysfunction)

RN 124937-52-6 CAPLUS

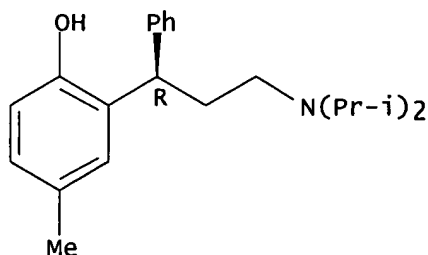
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

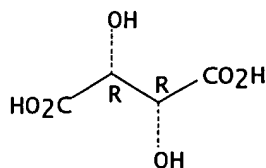


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 60 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:376565 CAPLUS
DN 138:390911
TI Antimuscarinic inhalants for treatment of urinary disorder
IN Cammarata, Sue K.; Kolbasa, Karen; Palandra, Joe; Richards, Ivan; Warchol, Mark P.
PA Pharmacia & Upjohn Company, USA
SO PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
|----|---------------|------|----------|--|------------|--|
| PI | WO 2003039464 | A2 | 20030515 | WO 2002-US35335 | 20021104 | |
| | WO 2003039464 | A3 | 20040226 | | | |
| | W: | | | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW | | |
| | RW: | | | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | |
| | CA 2464217 | AA | 20030515 | US 2001-337298P | P 20011105 | |
| | | | | CA 2002-2464217 | 20021104 | |
| | | | | US 2001-337298P | P 20011105 | |
| | | | | WO 2002-US35335 | W 20021104 | |
| | AU 2002342313 | A1 | 20030519 | AU 2002-342313 | 20021104 | |
| | | | | US 2001-337298P | P 20011105 | |
| | | | | WO 2002-US35335 | W 20021104 | |
| | US 2003144352 | A1 | 20030731 | US 2002-287061 | 20021104 | |
| | | | | US 2001-337298P | P 20011105 | |
| | EP 1441706 | A2 | 20040804 | EP 2002-776444 | 20021104 | |
| | R: | | | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK | | |
| | | | | US 2001-337298P | P 20011105 | |
| | | | | WO 2002-US35335 | W 20021104 | |
| | JP 2005511582 | T2 | 20050428 | JP 2003-541756 | 20021104 | |
| | | | | US 2001-337298P | P 20011105 | |
| | | | | WO 2002-US35335 | W 20021104 | |

AB The present invention concerns the use of antimuscarinic agents for the treatment of urinary disorders. The invention provides a method of treating urinary disorder in a mammal, including man, comprising administering to said mammal, in need of such a treatment, a therapeutically effective amount of an antimuscarinic agent, or solvate or prodrug thereof, said administration being performed by inhalation or

insufflation. Furthermore, the present invention provides a pharmaceutical composition for treating urinary disorder in a mammal, including man, which is in the form of an inhalable or insufflable preparation and comprises a therapeutically effective amount of an antimuscarinic agent, or solvate or prodrug thereof, together with an inhalably or insufflably acceptable carrier or diluent therefor. The invention also provides a novel use of an antimuscarinic agent, or solvate or prodrug thereof, for the manufacture of an inhalable or insufflable medicament for therapeutic treatment of urinary disorders. Tolterodine L-tartrate for aerosol administration was prepared, and administered to patients with overactive bladder to examine the pharmacokinetics.

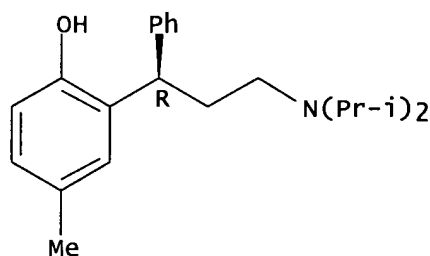
IT 124937-52-6
 RL: PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (antimuscarinic inhalants for treatment of urinary disorder)
 RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

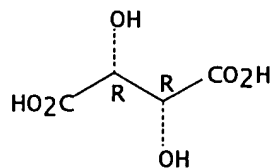


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 61 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:335062 CAPLUS

DN 138:353732

TI Quaternary ammonium compounds and their use as antimuscarinic agents

IN Richards, Ivan; Cammarata, Sue K.; Wegner, Craig D.; Hawley, Michael; Warchol, Mark P.; Kontny, Mark; Morozowich, Walter; Kolbasa, Karen P.; Moon, Malcolm W.; Bonafoux, Dominique; Wolfson, Sergey G.; Lennon, Patrick

J.
 PA Pharmacia & Upjohn Company, USA
 SO PCT Int. Appl., 69 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|-------------|
| PI | WO 2003035599 | A1 | 20030501 | WO 2002-US34529 | 20021025 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | US 2001-348930P | P 20011026 |
| | | | | US 2002-361979P | P 20020306 |
| | | | | US 2002-391521P | P 20020625 |
| | CA 2464223 | AA | 20030501 | CA 2002-2464223 | 20021025 |
| | | | | US 2001-348930P | P 20011026 |
| | | | | US 2002-361979P | P 20020306 |
| | | | | US 2002-391521P | P 20020625 |
| | US 2003158176 | A1 | 20030821 | WO 2002-US34529 | W 20021025 |
| | US 6890920 | B2 | 20050510 | US 2002-280906 | 20021025 |
| | | | | US 2001-348930P | P 20011026 |
| | | | | US 2002-361979P | P 20020306 |
| | | | | US 2002-391521P | P 20020625 |
| | BR 2002006207 | A | 20031223 | BR 2002-6207 | 20021025 |
| | | | | US 2001-348930P | P 20011026 |
| | | | | US 2002-361979P | P 20020306 |
| | | | | US 2002-391521P | P 20020625 |
| | | | | WO 2002-US34529 | W 20021025 |
| | EP 1461306 | A1 | 20040929 | EP 2002-793840 | 20021025 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK | | | | |
| | | | | US 2001-348930P | P 20011026 |
| | | | | US 2002-361979P | P 20020306 |
| | | | | US 2002-391521P | P 20020625 |
| | JP 2005524605 | T2 | 20050818 | WO 2002-US34529 | W 20021025 |
| | | | | JP 2003-538115 | 20021025 |
| | | | | US 2001-348930P | P 20011026 |
| | | | | US 2002-361979P | P 20020306 |
| | | | | US 2002-391521P | P 20020625 |
| | NO 2003002938 | A | 20030825 | WO 2002-US34529 | W 20021025 |
| | | | | NO 2003-2938 | 20030626 |
| | | | | US 2001-348930P | P 20011026 |
| | | | | US 2002-361979P | P 20020306 |
| | | | | US 2002-391521P | P 20020625 |
| | US 2005148672 | A1 | 20050707 | WO 2002-US34529 | W 20021025 |
| | | | | US 2005-74914 | 20050308 |
| | | | | US 2001-348930P | P 20011026 |
| | | | | US 2002-361979P | P 20020306 |
| | | | | US 2002-391521P | P 20020625 |
| OS | MARPAT 138:353732 | | | US 2002-280906 | A1 20021025 |

AB Novel quaternary ammonium compds. I [R1-R3 = (un)substituted alkyl; NR1R2, NR2R3, NR1R3 = heterocyclic; R4 = H, Me, acyl, alkoxycarbonyl, (un)substituted NH2; R5-R7 = H, OMe, OH, CONH2, SO2NH2, F, Cl, Br, I, CF3, (un)substituted alkyl; X = anion of a pharmaceutically acceptable acid] were prepared for use as antimuscarinic agents. Thus, tolterodine tartrate was converted to the free base and quaternized with MeI to give (R)-5,2-Me(OH)C6H3CHPhCH2CH2N+(CHMe2)2Me I- which has high affinity, but little selectivity for M1-M5 muscarinic receptors.

IT 124937-52-6, Tolterodine tartrate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of diarylpropylammonium salts as antimuscarinic agents)

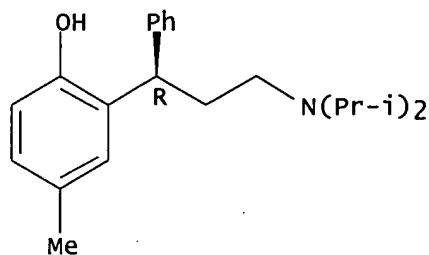
RN 124937-52-6 CAPLUS

CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5
 CMF C22 H31 N O

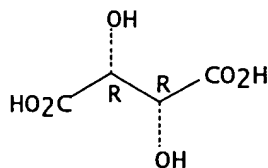
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 62 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2003:285824 CAPLUS
 DN 139:30512
 TI The use of tolterodine in children after oxybutynin failure
 AU Bolduc, S.; Upadhyay, J.; Payton, J.; Bagli, D. J.; McLorie, G. A.;
 Khoury, A. E.; Farhat, W.
 CS Division of Urology, The Hospital for Sick Children, University of
 Toronto, Toronto, ON, Can.
 SO BJU International (2003), 91(4), 398-401

CODEN: BJINFO; ISSN: 1464-4096

PB Blackwell Publishing Ltd.

DT Journal

LA English

AB This work assessed the safety and efficacy of tolterodine tartrate prescribed to children with dysfunctional urinary voiding who previously had failed to tolerate oxybutynin chloride. The 34 patients were treated with oxybutynin for a median (range) of 6 (2-84) mo. When significant side-effects were reported, they were crossed over to tolterodine. The mean age at the 1st dose of tolterodine was 8.9 yr; the dose was 1 mg twice daily for 12 patients and 2 mg twice daily for 22. The median treatment with tolterodine was 11.5 mo, with 20 (59%) patients reporting no side-effects; six described the same but tolerable side-effects as with oxybutynin. Eight patients discontinued tolterodine because of side-effects after a median (range) of 5 (1-11) months. The efficacy of tolterodine was comparable with that of oxybutynin diaries. The reduction in wetting episodes after 1 yr was >90% in 23 (68%) of the patients, more than half in five and less than half (or failure) in six patients. Tolterodine is tolerated well in children. In this subgroup of patients who could not tolerate oxybutynin, 77% were able to continue tolterodine treatment with no significant side-effects.

IT 124937-52-6, Tolterodine tartrate
 RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (tolterodine efficacy and side effects in children with bladder dysfunction who were intolerant to oxybutynin)

RN 124937-52-6 CAPLUS

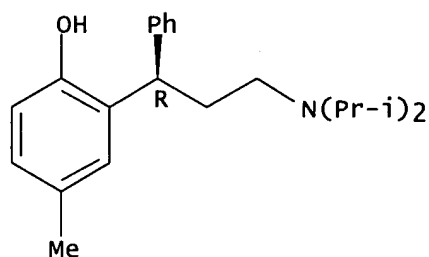
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

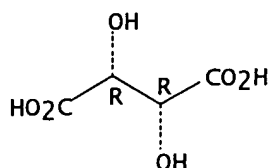


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 63 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:261600 CAPLUS
DN 138:276286
TI Pharmaceutical compositions containing muscarinic antagonists and
5 α -reductase inhibitors for urinary tract disorder treatment
IN Arneric, Stephen P.; Andersson, Per-Olof
PA Pharmacia AB, Swed.
SO PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|------------|
| PI | WO 2003026564 | A2 | 20030403 | WO 2002-SE1748 | 20020926 |
| | WO 2003026564 | A3 | 20031211 | | |
| | WO 2003026564 | C2 | 20040617 | | |
| | W: | | | | |
| | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, | | | | |
| | CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, | | | | |
| | GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, | | | | |
| | LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, | | | | |
| | PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, | | | | |
| | UA, UG, US, UZ, VN, YU, ZA, ZM, ZW | | | | |
| | RW: | | | | |
| | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, | | | | |
| | KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, | | | | |
| | FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, | | | | |
| | CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | US 2001-965556 | A 20010927 |
| | | | | SE 2001-3858 | A 20011120 |
| | US 2003060513 | A1 | 20030327 | US 2001-965556 | 20010927 |
| | CA 2461731 | AA | 20030403 | CA 2002-2461731 | 20020926 |
| | | | | US 2001-965556 | A 20010927 |
| | | | | SE 2001-3858 | A 20011120 |
| | | | | WO 2002-SE1748 | W 20020926 |
| | EP 1438035 | A2 | 20040721 | EP 2002-775633 | 20020926 |
| | R: | | | | |
| | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, | | | | |
| | IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK | | | | |
| | | | | US 2001-965556 | A 20010927 |
| | | | | SE 2001-3858 | A 20011120 |
| | | | | WO 2002-SE1748 | W 20020926 |
| | BR 2002012824 | A | 20041013 | BR 2002-12824 | 20020926 |
| | | | | US 2001-965556 | A 20010927 |
| | | | | SE 2001-3858 | A 20011120 |
| | | | | WO 2002-SE1748 | W 20020926 |
| | JP 2005503424 | T2 | 20050203 | JP 2003-530203 | 20020926 |
| | | | | US 2001-965556 | A 20010927 |
| | | | | SE 2001-3858 | A 20011120 |
| | | | | WO 2002-SE1748 | W 20020926 |

PATENT FAMILY INFORMATION:
FAN 2003:242003

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|--|----------|--|-------------|
| PI | US 2003060513 | A1 | 20030327 | US 2001-965556 | 20010927 |
| | CA 2461731 | AA | 20030403 | CA 2002-2461731 | 20020926 |
| | | | | US 2001-965556 | A 20010927 |
| | | | | SE 2001-3858 | A 20011120 |
| | | | | WO 2002-SE1748 | W 20020926 |
| | | | | WO 2002-SE1748 | 20020926 |
| | WO 2003026564 | A2 | 20030403 | | |
| | WO 2003026564 | A3 | 20031211 | | |
| | WO 2003026564 | C2 | 20040617 | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW | | | |
| EP | | | | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | |
| | | | | US 2001-965556 | A 20010927 |
| | | | | SE 2001-3858 | A 20011120 |
| | EP 1438035 | A2 | 20040721 | EP 2002-775633 | 20020926 |
| | R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK | | | |
| | | | | US 2001-965556 | A 20010927 |
| | | | | SE 2001-3858 | A 20011120 |
| | | | | WO 2002-SE1748 | W 20020926 |
| | BR 2002012824 | A | 20041013 | BR 2002-12824 | 20020926 |
| | | | | US 2001-965556 | A 20010927 |
| CN | | | | SE 2001-3858 | A 20011120 |
| | | | | WO 2002-SE1748 | W 20020926 |
| | CN 1558756 | A | 20041229 | CN 2002-818876 | 20020926 |
| | | | | US 2001-965556 | A 20010927 |
| | | | | SE 2001-3858 | A 20011120 |
| | JP 2005503424 | T2 | 20050203 | JP 2003-530203 | 20020926 |
| | | | | US 2001-965556 | A 20010927 |
| | | | | SE 2001-3858 | A 20011120 |
| | | | | WO 2002-SE1748 | W 20020926 |
| | US 2004116533 | A1 | 20040617 | US 2003-729764 | 20031205 |
| ZA | | | | US 2001-965556 | A1 20010927 |
| | ZA 2004002362 | A | 20050120 | ZA 2004-2362 | 20040325 |
| | | | | US 2001-965556 | A 20010927 |

AB The present invention concerns the field of urol. The invention provides a pharmaceutical composition comprising a combination of a first compound selected from the group consisting of muscarinic receptor antagonists, 5 α -reductase inhibitors, and α -adrenergic receptor antagonists, and precursors and salts, and a second compound selected from the group consisting of 5-HT_{1a} receptor agonists and antagonists, and precursors and salts thereof, and optionally a carrier or a diluent. There is also provided a method of treatment of urinary disorders in a mammal, including humans. A pharmaceutical composition is prepared by combining tolterodine with a neutral 5-HT_{1a} receptor antagonist in a carrier. The composition contains 0.05-4 mg tolterodine/kg patient body weight (e.g., 3-240 mg tolterodine for a person weighing 60 kg) and 0.01-1 mg of neutral 5-HT_{1a} receptor antagonist/kg of patient body weight. The composition is administered to a patient for the treatment of incontinence, and particularly stress incontinence, urge incontinence or mixed incontinence.

IT 124937-52-6

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmaceutical compns. containing muscarinic antagonists and
5 α -reductase inhibitors for urinary tract disorder treatment)

RN 124937-52-6 CAPLUS

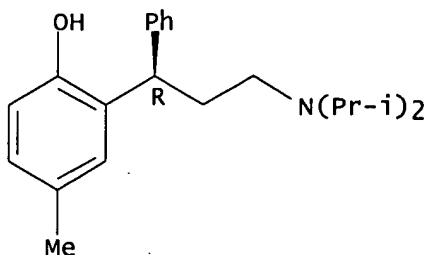
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
(2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

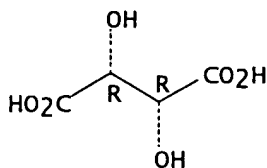


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 64 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:19961 CAPLUS

DN 138:78464

TI Pharmaceutical preparations based on active ingredients susceptible to
illicit administration

IN Garavani, Alberto; Marchiorri, Maurizio; Di Martino, Alessandro

PA Altergon S.A., Switz.

SO Eur. Pat. Appl., 11 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|------|----------|-----------------|----------|
| PI | EP 1273301 | A2 | 20030108 | EP 2002-15073 | 20020705 |
| | EP 1273301 | A3 | 20030409 | | |
| | EP 1273301 | B1 | 20060906 | | |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

AT 338567 E 20060915 IT 2001-MI1446 A 20010706
 IT 2002-15073 20020705
 IT 2001-MI1446 A 20010706

AB Disclosed are pharmaceutical formulations for oral administration, preferably in the form of a soft capsule enclosing an active principle susceptible to illicit administration and at least one pharmaceutically acceptable organoleptic marker which is particularly evident for its odor, taste or color or for its scarce miscibility with food. The active principle is selected from the group consisting of a substance acting on the central nervous system and/or as a narcotic and of a substance with anabolizing activity or the like. The organoleptic marker is independently selected out of one or more substances belonging to the group consisting of flavoring agents, coloring agents, odorants, and oils.

IT 124937-52-6, Tolterodine tartrate

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (pharmaceutical preps. based on active ingredients susceptible to illicit administration containing organoleptic markers)

RN 124937-52-6 CAPLUS

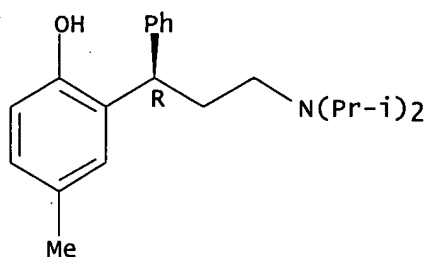
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

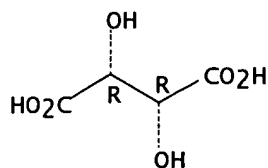


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



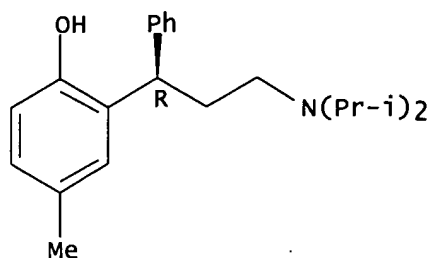
L11 ANSWER 65 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:945736 CAPLUS

DN 139:159672

TI Therapeutic Efficacy Of Extended Release Oxybutynin Chloride, And Immediate Release And Long Acting Tolterodine Tartrate In Children With Diurnal Urinary Incontinence
 AU Reinberg, Y.; Crocker, J.; Wolpert, J.; Vandersteen, D.
 CS The Center for Pediatric Urology, Pediatric Surgical Associates, Minneapolis, MN, 55404, USA
 SO Journal of Urology (Hagerstown, MD, United States) (2002), Volume Date 2003, 169(1), 317-319
 CODEN: JOURAA; ISSN: 0022-5347
 PB Lippincott Williams & Wilkins
 DT Journal
 LA English
 AB We compare the tolerability and efficacy of extended release oxybutynin chloride, and immediate release and long acting tolterodine tartrate in children with non-neurogenic diurnal urinary incontinence and symptoms of overactive bladder. Children with a history of diurnal urinary incontinence were arbitrarily assigned to extended release oxybutynin, immediate release tolterodine or long acting tolterodine. The dose was titrated until effective (onset of complete diurnal urinary continence), maximal recommended dosage was achieved or bothersome anticholinergic side effects developed. An independent observer recorded the dose used, anticholinergic side effects and efficacy of therapy (incidence of urinary frequency, urgency, posturing and urinary incontinence). The study included 86 girls and 46 boys. There were no statistically significant differences among the 3 treatment groups regarding the presence of peripheral or central nervous system anticholinergic side effects. Extended release oxybutynin and long acting tolterodine were significantly more effective at reducing daytime urinary incontinence than immediate release tolterodine ($p < 0.01$ and $p < 0.05$, resp.). Extended release oxybutynin was significantly more effective than long acting tolterodine for complete resolution of diurnal incontinence ($p < 0.05$). Thus, extended release oxybutynin and long acting tolterodine are more effective than immediate release tolterodine in decreasing diurnal urinary incontinence. Extended release oxybutynin chloride is more effective than either immediate or long acting tolterodine for control of daytime urinary incontinence and urinary frequency.
 IT 124937-52-6, Tolterodine tartrate
 RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (therapeutic efficacy of extended release oxybutynin chloride, and immediate release and long acting tolterodine tartrate in children with diurnal urinary incontinence)
 RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)
 CM 1
 CRN 124937-51-5
 CMF C22 H31 N O

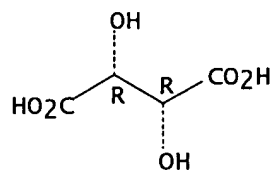
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 66 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2002:849709 CAPLUS
 DN 137:353828
 TI Poly(alkylene oxide) having reduced formic compound content for release dosage form
 IN Fan, You-Ling
 PA Union Carbide Chemicals & Plastics Technology Corporation, USA
 SO PCT Int. Appl., 25 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| PI WO 2002088217 | A1 | 20021107 | WO 2002-US13444 | 20020429 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| EP 1385898 | A1 | 20040204 | US 2001-287885P | P 20010501 |
| EP 1385898 | B1 | 20060531 | EP 2002-734076 | 20020429 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| US 2001-287885P | | | | P 20010501 |
| WO 2002-US13444 | | | | W 20020429 |

JP 2004530748 T2 20041007 JP 2002-585514 20020429
 US 2001-287885P P 20010501
 WO 2002-US13444 W 20020429
 AT 328028 E 20060615 AT 2002-734076 20020429
 US 2001-287885P P 20010501

AB Title particle comprises (i) a polymer polymerized from an alkylene oxide monomer having weight average weight 100,000-1,000,000 g/g mol and (ii) 0-200 ppm

(based on total weight of the particle) formic compound, such as formic acid and its salts and esters, wherein the particle has a core and an shell with concentration gradient of the formic compound (the core contains higher formic compound content than shell). The method for reducing formic compound on surface of the polyoxyalkylene particle comprises treating the particle with an acid having pKa lower than the pKa of formic acid. Thus, a slurry containing 70 parts Polyox WSR N 80NF (polyethylene oxide) with inorg. formate level >500 ppm was mixed with 20 mL hydrochloric acid (37%) and 480 mL iso-Pr alc. at room temperature for 60 min and washed to give a polymer with inorg. formate content <150 ppm.

IT 124937-52-6, Tolterodine tartrate

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(poly(alkylene oxide) having reduced formic compound content obtained by treating with acid for release dosage form)

RN 124937-52-6 CAPLUS

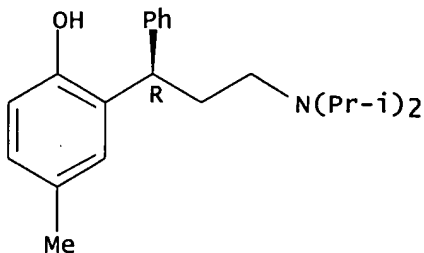
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

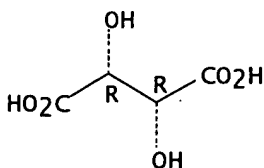


CM 2

CRN 87-69-4

CMF C4 H6 O6

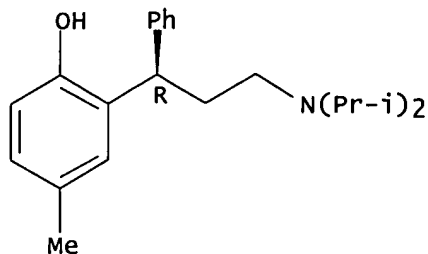
Absolute stereochemistry.



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 67 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:728118 CAPLUS
DN 137:257572
TI Treatment of overactive bladder with once-daily extended-release
tolterodine or oxybutynin: the antimuscarinic clinical effectiveness trial
(ACET)
AU Sussman, David; Garely, Alan
CS Department of Surgery, Division of Urology, University of Medicine and
Dentistry of New Jersey, Stratford, NJ, 08084, USA
SO Current Medical Research and Opinion (2002), 18(4), 177-184
CODEN: CMROCX; ISSN: 0300-7995
PB LibraPharm Ltd.
DT Journal
LA English
AB Treatment with the antimuscarinic agents tolterodine and oxybutynin is the
mainstay of therapy for overactive bladder, a chronic and debilitating
condition characterized by urinary urgency with or without urge
incontinence, usually in combination with urinary frequency and nocturia.
This study consisted of two trials; in one, patients with overactive
bladder were randomized to 8 wk of open-label treatment with either 2 mg
or 4 mg of once-daily extended-release tolterodine (TER), and in the other
to 5 mg or 10 mg of extended-release oxybutynin (OER). The study protocol
and design were identical for the two trials and site selection ensured
that there was no bias in either trial for the tendency of investigators
to prescribe one drug rather than the other, or for geog. location. A
total of 1289 patients were enrolled, 669 in the tolterodine trial (TER 2
mg, n = 333; TER 4 mg, n = 336) and 620 in the oxybutynin trial (OER 5 mg,
n = 313; OER 10 mg, n = 307). Fewer patients prematurely withdrew from
the trial in the TER 4 mg group (12%) than either the OER 5 mg (19%; p =
0.01) or OER 10 mg groups (21%; p = 0.002). More patients in the OER 10
mg group than the TER 4 mg group withdrew because of poor tolerability
(13% vs. 6%; p = 0.001). After 8 wk, 70% of patients in the TER 4 mg
group perceived an improved bladder condition, compared with 60% in the
TER 2 mg group, 59% in the OER 5 mg group and 60% in the OER 10 mg group
(all p < 0.01 vs TER 4 mg). Response to therapy was greater in a subgroup
of patients whose perception of bladder condition was moderate to severe
at baseline (TER 4 mg 77% vs OER 10 mg 65%; p < 0.01). Dry mouth was
dose-dependent with both agents, although differences between doses only
reached statistical significance in the oxybutynin trial (OER 5 mg vs OER
10 mg; p = 0.05). Patients treated with TER 4 mg reported a significantly
lower severity of dry mouth compared with OER 10 mg. In conclusion, the
greater efficacy and tolerability of tolterodine ER 4 mg suggests improved
clin. effectiveness compared with oxybutynin ER 10 mg.
IT 124937-52-6, Tolterodine tartrate
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological
activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tolterodine or oxybutynin once-daily extended-release in treatment of
overactive bladder)
RN 124937-52-6 CAPLUS
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
(2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)
CM 1
CRN 124937-51-5
CMF C22 H31 N O

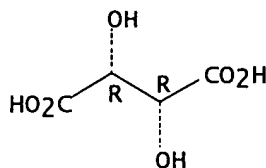
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.

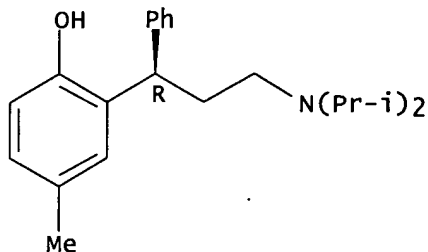
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 68 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2002:609156 CAPLUS
 DN 138:254881
 TI Synthetic study on M-receptor antagonist tolterodine tartrate
 AU Zhou, Xinbo; Gao, Wenfang; Zheng, Hong; Zhang, Yinghua
 CS School of Pharmaceutical Engineering, Shenyang Pharmaceutical University,
 Shenyang, 110016, Peop. Rep. China
 SO Zhongguo Yaowu Huaxue Zazhi (2002), 12(2), 107-109
 CODEN: ZYHZEJ; ISSN: 1005-0108
 PB Zhongguo Yaowu Huaxue Zazhi Bianjibu
 DT Journal
 LA Chinese
 OS CASREACT 138:254881
 AB Tolterodine was synthesized through cyclization, methylation,
 chlorination, amidation, reduction, demethylation, and separation from the
 starting material cinnamic acid and p-cresol with an overall yield 14.4%. Two
 improved methods were presented for the preparation of the two key
 intermediates, 6-methyl-4-phenyl-3,4-dihydrocoumarin and
 N,N-diisopropyl-3-(2-methoxy-5-methylphenyl)-3-phenylpropionamine HCl (8).
 IT 124937-52-6P, Detrol
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
 study); PREP (Preparation); USES (Uses)
 (synthesis of tolterodine tartrate as M-receptor antagonist)
 RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
 (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5
CMF C22 H31 N O

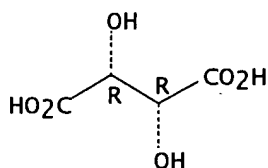
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 69 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:556104 CAPLUS
DN 137:109489
TI Compositions comprising a polypeptide and an active agent
IN Piccariello, Thomas; Olon, Lawrence P.; Kirk, Randal J.
PA USA
SO U.S. Pat. Appl. Publ., 34 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 20

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------|------|----------|-----------------|------------|
| PI US 2002099013 | A1 | 20020725 | US 2001-933708 | 20010822 |
| | | | US 2000-247556P | P 20001114 |
| | | | US 2000-247558P | P 20001114 |
| | | | US 2000-247559P | P 20001114 |
| | | | US 2000-247560P | P 20001114 |
| | | | US 2000-247561P | P 20001114 |
| | | | US 2000-247594P | P 20001114 |
| | | | US 2000-247595P | P 20001114 |
| | | | US 2000-247606P | P 20001114 |
| | | | US 2000-247607P | P 20001114 |
| | | | US 2000-247608P | P 20001114 |
| | | | US 2000-247609P | P 20001114 |
| | | | US 2000-247610P | P 20001114 |
| | | | US 2000-247611P | P 20001114 |
| | | | US 2000-247612P | P 20001114 |

| | | | | | |
|---------------|----|----------|-----------------|----|----------|
| | | | US 2000-247620P | P | 20001114 |
| | | | US 2000-247621P | P | 20001114 |
| | | | US 2000-247634P | P | 20001114 |
| | | | US 2000-247635P | P | 20001114 |
| | | | US 2000-247698P | P | 20001114 |
| | | | US 2000-247699P | P | 20001114 |
| | | | US 2000-247700P | P | 20001114 |
| | | | US 2000-247701P | P | 20001114 |
| | | | US 2000-247702P | P | 20001114 |
| | | | US 2000-247797P | P | 20001114 |
| | | | US 2000-247798P | P | 20001114 |
| | | | US 2000-247799P | P | 20001114 |
| | | | US 2000-247800P | P | 20001114 |
| | | | US 2000-247801P | P | 20001114 |
| | | | US 2000-247802P | P | 20001114 |
| | | | US 2000-247803P | P | 20001114 |
| | | | US 2000-247804P | P | 20001114 |
| | | | US 2000-247805P | P | 20001114 |
| | | | US 2000-247807P | P | 20001114 |
| | | | US 2000-247832P | P | 20001114 |
| | | | US 2000-247833P | P | 20001114 |
| | | | US 2000-247926P | P | 20001114 |
| | | | US 2000-247927P | P | 20001114 |
| | | | US 2000-247928P | P | 20001114 |
| | | | US 2000-247929P | P | 20001114 |
| | | | US 2000-247930P | P | 20001114 |
| US 2004087483 | A1 | 20040506 | US 2002-136433 | | 20020502 |
| | | | US 2000-642820 | A2 | 20000822 |
| | | | US 2000-248607P | P | 20001116 |
| | | | US 2001-933708 | A2 | 20010822 |
| US 2004063628 | A1 | 20040401 | US 2002-156527 | | 20020529 |
| US 7060708 | B2 | 20060613 | | | |
| | | | US 1999-265415 | B2 | 19990310 |
| | | | US 1999-411238 | B2 | 19991004 |
| | | | WO 2000-US5693 | A | 20000306 |
| | | | US 2000-642820 | A2 | 20000822 |
| | | | US 2000-248620P | P | 20001116 |
| | | | US 2000-248656P | P | 20001116 |
| | | | US 2000-248658P | P | 20001116 |
| | | | US 2000-248659P | P | 20001116 |
| | | | US 2000-248660P | P | 20001116 |
| | | | US 2000-248662P | P | 20001116 |
| | | | US 2000-248663P | P | 20001116 |
| | | | US 2000-248685P | P | 20001116 |
| | | | US 2000-248737P | P | 20001116 |
| | | | US 2000-248738P | P | 20001116 |
| | | | US 2000-248764P | P | 20001116 |
| | | | US 2000-248767P | P | 20001116 |
| | | | US 2000-248768P | P | 20001116 |
| | | | US 2000-248769P | P | 20001116 |
| | | | US 2000-248770P | P | 20001116 |
| | | | US 2000-248771P | P | 20001116 |
| | | | US 2000-248772P | P | 20001116 |
| | | | US 2000-248774P | P | 20001116 |
| | | | US 2000-248776P | P | 20001116 |
| | | | US 2000-248777P | P | 20001116 |
| | | | US 2000-248778P | P | 20001116 |
| | | | US 2000-248779P | P | 20001116 |
| | | | US 2000-248782P | P | 20001116 |
| | | | US 2000-248787P | P | 20001116 |
| | | | US 2000-248794P | P | 20001116 |

| | | | | | |
|---------------|----|----------|-----------------|----|----------|
| | | | US 2000-248795P | P | 20001116 |
| | | | US 2000-248796P | P | 20001116 |
| | | | US 2000-248797P | P | 20001116 |
| | | | US 2001-933708 | A2 | 20010822 |
| | | | US 2001-986426 | A2 | 20011108 |
| | | | US 2001-987458 | B2 | 20011114 |
| | | | WO 2001-US43089 | B2 | 20011114 |
| | | | US 2001-988034 | B2 | 20011116 |
| | | | US 2001-988071 | B2 | 20011116 |
| | | | WO 2001-US43115 | B2 | 20011116 |
| | | | WO 2001-US43117 | B2 | 20011116 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |
| US 2006014697 | A1 | 20060119 | US 2005-89056 | | 20050325 |
| | | | US 2001-933708 | A2 | 20010822 |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-156527 | A2 | 20020529 |
| | | | WO 2003-US5525 | A2 | 20030224 |
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| | | | US 2004-567802P | P | 20040505 |
| | | | US 2004-568011P | P | 20040505 |
| | | | US 2004-923088 | A2 | 20040823 |
| | | | US 2004-923257 | A2 | 20040823 |
| | | | US 2004-953110 | A2 | 20040930 |
| | | | US 2004-953111 | A2 | 20040930 |
| | | | US 2004-953116 | A2 | 20040930 |
| | | | US 2004-953119 | A2 | 20040930 |
| | | | US 2004-955006 | A2 | 20040930 |
| | | | WO 2004-US32131 | A2 | 20040930 |

PATENT FAMILY INFORMATION:

FAN 2000:628201

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|------------|
| PI | WO 2000052078 | A1 | 20000908 | WO 2000-US5693 | 20000306 |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | CA 2367042 | AA | 20000908 | US 1999-123146P | P 19990305 |
| | | | | CA 2000-2367042 | 20000306 |
| | | | | US 1999-123146P | P 19990305 |
| | | | | WO 2000-US5693 | W 20000306 |
| | EP 1257592 | A1 | 20021120 | EP 2000-916076 | 20000306 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | | | |
| | | | | US 1999-123146P | P 19990305 |
| | | | | WO 2000-US5693 | W 20000306 |
| | AU 771188 | B2 | 20040318 | AU 2000-37239 | 20000306 |
| | | | | US 1999-123146P | P 19990305 |
| | | | | WO 2000-US5693 | W 20000306 |
| | US 2002128177 | A1 | 20020912 | US 2001-986426 | 20011108 |
| | US 7018654 | B2 | 20060328 | | |
| | | | | US 1999-123146P | P 19990305 |

| | | | | | |
|---------------|----|----------|----------------|----|----------|
| US 2004063628 | A1 | 20040401 | US 1999-265415 | B2 | 19990310 |
| US 7060708 | B2 | 20060613 | US 1999-411238 | B2 | 19991004 |
| | | | WO 2000-US5693 | W | 20000306 |
| | | | US 2001-959396 | B2 | 20011024 |
| | | | US 2002-156527 | | 20020529 |

| | | |
|-----------------|----|----------|
| US 1999-265415 | B2 | 19990310 |
| US 1999-411238 | B2 | 19991004 |
| WO 2000-US5693 | A | 20000306 |
| US 2000-642820 | A2 | 20000822 |
| US 2000-248620P | P | 20001116 |
| US 2000-248656P | P | 20001116 |
| US 2000-248658P | P | 20001116 |
| US 2000-248659P | P | 20001116 |
| US 2000-248660P | P | 20001116 |
| US 2000-248662P | P | 20001116 |
| US 2000-248663P | P | 20001116 |
| US 2000-248685P | P | 20001116 |
| US 2000-248737P | P | 20001116 |
| US 2000-248738P | P | 20001116 |
| US 2000-248764P | P | 20001116 |
| US 2000-248767P | P | 20001116 |
| US 2000-248768P | P | 20001116 |
| US 2000-248769P | P | 20001116 |
| US 2000-248770P | P | 20001116 |
| US 2000-248771P | P | 20001116 |
| US 2000-248772P | P | 20001116 |
| US 2000-248774P | P | 20001116 |
| US 2000-248776P | P | 20001116 |
| US 2000-248777P | P | 20001116 |
| US 2000-248778P | P | 20001116 |
| US 2000-248779P | P | 20001116 |
| US 2000-248782P | P | 20001116 |
| US 2000-248787P | P | 20001116 |
| US 2000-248794P | P | 20001116 |
| US 2000-248795P | P | 20001116 |
| US 2000-248796P | P | 20001116 |
| US 2000-248797P | P | 20001116 |
| US 2001-933708 | A2 | 20010822 |
| US 2001-986426 | A2 | 20011108 |
| US 2001-987458 | B2 | 20011114 |
| WO 2001-US43089 | B2 | 20011114 |
| US 2001-988034 | B2 | 20011116 |
| US 2001-988071 | B2 | 20011116 |
| WO 2001-US43115 | B2 | 20011116 |
| WO 2001-US43117 | B2 | 20011116 |
| US 2002-358381P | P | 20020222 |
| US 2002-366258P | P | 20020322 |
| AU 2004-202699 | | 20040618 |
| US 1999-123146P | P | 19990305 |
| WO 2000-US5693 | W | 20000306 |

| | | |
|---------------|----|----------|
| AU 2004202699 | A1 | 20040729 |
|---------------|----|----------|

FAN 2000:645894
PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

| | | | | | |
|----|---|----|----------|----------------|----------|
| PI | WO 2000053233 | A1 | 20000914 | WO 2000-US3717 | 20000310 |
| | W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, | | | | |

| DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | | |
|--|---|----------|----------|-----------------|------------|
| | | | | | |
| | | | | US 1999-265415 | A 19990310 |
| | | | | US 1999-411238 | A 19991004 |
| JP 2002540073 | T2 | 20021126 | | JP 2000-603722 | 20000310 |
| | | | | US 1999-265415 | A 19990310 |
| | | | | US 1999-411238 | A 19991004 |
| | | | | WO 2000-US3717 | W 20000310 |
| FAN | 2002:332011 | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| PI | WO 2002034237 | A1 | 20020502 | WO 2001-US26142 | 20010822 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | US 2000-642820 | A 20000822 |
| | | | | US 2000-247613P | P 20001114 |
| | | | | US 2000-247614P | P 20001114 |
| | | | | US 2000-247615P | P 20001114 |
| | | | | US 2000-247616P | P 20001114 |
| | | | | US 2000-247617P | P 20001114 |
| | | | | US 2000-247622P | P 20001114 |
| | | | | US 2000-247630P | P 20001114 |
| | | | | US 2000-247631P | P 20001114 |
| | | | | US 2000-247632P | P 20001114 |
| | | | | US 2000-247633P | P 20001114 |
| US 6716452 | B1 | 20040406 | | US 2000-642820 | 20000822 |
| CA 2420590 | AA | 20020502 | | CA 2001-2420590 | 20010822 |
| | | | | US 2000-642820 | A 20000822 |
| AU 2001086599 | A5 | 20020506 | | WO 2001-US26142 | W 20010822 |
| | | | | AU 2001-86599 | 20010822 |
| | | | | US 2000-642820 | A 20000822 |
| | | | | WO 2001-US26142 | W 20010822 |
| EP 1311242 | A1 | 20030521 | | EP 2001-966056 | 20010822 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| | | | | US 2000-642820 | A 20000822 |
| | | | | WO 2001-US26142 | W 20010822 |
| JP 2004523480 | T2 | 20040805 | | JP 2002-537291 | 20010822 |
| | | | | US 2000-642820 | A 20000822 |
| | | | | US 2000-247556P | P 20001114 |
| | | | | US 2000-247558P | P 20001114 |
| | | | | US 2000-247559P | P 20001114 |
| | | | | US 2000-247560P | P 20001114 |
| | | | | US 2000-247561P | P 20001114 |
| | | | | US 2000-247594P | P 20001114 |
| | | | | US 2000-247595P | P 20001114 |
| | | | | US 2000-247606P | P 20001114 |
| | | | | US 2000-247607P | P 20001114 |
| | | | | US 2000-247608P | P 20001114 |
| | | | | US 2000-247609P | P 20001114 |
| | | | | US 2000-247610P | P 20001114 |
| | | | | US 2000-247611P | P 20001114 |
| | | | | US 2000-247612P | P 20001114 |
| | | | | US 2000-247613P | P 20001114 |

| | | | | | |
|-----|---|------|----------|-----------------|-------------|
| | | | | US 2000-247614P | P 20001114 |
| | | | | US 2000-247615P | P 20001114 |
| | | | | US 2000-247616P | P 20001114 |
| | | | | US 2000-247617P | P 20001114 |
| | | | | US 2000-247620P | P 20001114 |
| | | | | US 2000-247621P | P 20001114 |
| | | | | US 2000-247622P | P 20001114 |
| | | | | US 2000-247630P | P 20001114 |
| | | | | US 2000-247631P | P 20001114 |
| | | | | US 2000-247632P | P 20001114 |
| | | | | US 2000-247633P | P 20001114 |
| | | | | US 2000-247634P | P 20001114 |
| | | | | US 2000-247635P | P 20001114 |
| | | | | US 2000-247698P | P 20001114 |
| | | | | US 2000-247699P | P 20001114 |
| | | | | US 2000-247701P | P 20001114 |
| | | | | US 2000-247702P | P 20001114 |
| | | | | US 2000-247797P | P 20001114 |
| | | | | US 2000-247798P | P 20001114 |
| | | | | US 2000-247799P | P 20001114 |
| | | | | US 2000-247800P | P 20001114 |
| | | | | US 2000-247801P | P 20001114 |
| | | | | US 2000-247802P | P 20001114 |
| | | | | US 2000-247803P | P 20001114 |
| | | | | US 2000-247804P | P 20001114 |
| | | | | WO 2001-US26142 | W 20010822 |
| | | | | US 2003-727565 | 20031205 |
| | | | | US 2000-642820 | A3 20000822 |
| | US 2004127397 | A1 | 20040701 | | |
| FAN | 2002:504641 | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| PI | WO 2002051432 | A1 | 20020704 | WO 2001-US43115 | 20011116 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, | | | | |
| | CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, | | | | |
| | GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, | | | | |
| | LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, | | | | |
| | PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, | | | | |
| | UG, US, UZ, VN, YU, ZA, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, | | | | |
| | CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, | | | | |
| | BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | US 2004063628 | A1 | 20040401 | US 2002-156527 | 20020529 |
| | US 7060708 | B2 | 20060613 | | |
| | | | | US 1999-265415 | B2 19990310 |
| | | | | US 1999-411238 | B2 19991004 |
| | | | | WO 2000-US5693 | A 20000306 |
| | | | | US 2000-642820 | A2 20000822 |
| | | | | US 2000-248620P | P 20001116 |
| | | | | US 2000-248656P | P 20001116 |
| | | | | US 2000-248658P | P 20001116 |
| | | | | US 2000-248659P | P 20001116 |
| | | | | US 2000-248660P | P 20001116 |
| | | | | US 2000-248662P | P 20001116 |
| | | | | US 2000-248663P | P 20001116 |
| | | | | US 2000-248685P | P 20001116 |
| | | | | US 2000-248737P | P 20001116 |
| | | | | US 2000-248738P | P 20001116 |
| | | | | US 2000-248764P | P 20001116 |
| | | | | US 2000-248767P | P 20001116 |
| | | | | US 2000-248768P | P 20001116 |
| | | | | US 2000-248769P | P 20001116 |

| | | | | | |
|---------------|---|------|----------|-----------------|-------------|
| | | | | US 2000-248770P | P 20001116 |
| | | | | US 2000-248771P | P 20001116 |
| | | | | US 2000-248772P | P 20001116 |
| | | | | US 2000-248774P | P 20001116 |
| | | | | US 2000-248776P | P 20001116 |
| | | | | US 2000-248777P | P 20001116 |
| | | | | US 2000-248778P | P 20001116 |
| | | | | US 2000-248779P | P 20001116 |
| | | | | US 2000-248782P | P 20001116 |
| | | | | US 2000-248787P | P 20001116 |
| | | | | US 2000-248794P | P 20001116 |
| | | | | US 2000-248795P | P 20001116 |
| | | | | US 2000-248796P | P 20001116 |
| | | | | US 2000-248797P | P 20001116 |
| | | | | US 2001-933708 | A2 20010822 |
| | | | | US 2001-986426 | A2 20011108 |
| | | | | US 2001-987458 | B2 20011114 |
| | | | | WO 2001-US43089 | B2 20011114 |
| | | | | US 2001-988034 | B2 20011116 |
| | | | | US 2001-988071 | B2 20011116 |
| | | | | WO 2001-US43115 | B2 20011116 |
| | | | | WO 2001-US43117 | B2 20011116 |
| | | | | US 2002-358381P | P 20020222 |
| | | | | US 2002-366258P | P 20020322 |
| FAN | 2002:696639 | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| | ----- | ---- | ----- | ----- | ----- |
| PI | US 2002128177 | A1 | 20020912 | US 2001-986426 | 20011108 |
| | US 7018654 | B2 | 20060328 | | |
| | | | | US 1999-123146P | P 19990305 |
| | | | | US 1999-265415 | B2 19990310 |
| | | | | US 1999-411238 | B2 19991004 |
| | | | | WO 2000-US5693 | W 20000306 |
| | | | | US 2001-959396 | B2 20011024 |
| | | | | WO 2000-US5693 | 20000306 |
| WO 2000052078 | | A1 | 20000908 | | |
| W: | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, | | | | |
| | CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, | | | | |
| | IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, | | | | |
| | MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, | | | | |
| | SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: | GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, | | | | |
| | DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, | | | | |
| | CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | US 1999-123146P | P 19990305 |
| US 2004063628 | | A1 | 20040401 | US 2002-156527 | 20020529 |
| US 7060708 | | B2 | 20060613 | | |
| | | | | US 1999-265415 | B2 19990310 |
| | | | | US 1999-411238 | B2 19991004 |
| | | | | WO 2000-US5693 | A 20000306 |
| | | | | US 2000-642820 | A2 20000822 |
| | | | | US 2000-248620P | P 20001116 |
| | | | | US 2000-248656P | P 20001116 |
| | | | | US 2000-248658P | P 20001116 |
| | | | | US 2000-248659P | P 20001116 |
| | | | | US 2000-248660P | P 20001116 |
| | | | | US 2000-248662P | P 20001116 |
| | | | | US 2000-248663P | P 20001116 |
| | | | | US 2000-248685P | P 20001116 |
| | | | | US 2000-248737P | P 20001116 |
| | | | | US 2000-248738P | P 20001116 |
| | | | | US 2000-248764P | P 20001116 |

| | | |
|-----------------|----|----------|
| US 2000-248767P | P | 20001116 |
| US 2000-248768P | P | 20001116 |
| US 2000-248769P | P | 20001116 |
| US 2000-248770P | P | 20001116 |
| US 2000-248771P | P | 20001116 |
| US 2000-248772P | P | 20001116 |
| US 2000-248774P | P | 20001116 |
| US 2000-248776P | P | 20001116 |
| US 2000-248777P | P | 20001116 |
| US 2000-248778P | P | 20001116 |
| US 2000-248779P | P | 20001116 |
| US 2000-248782P | P | 20001116 |
| US 2000-248787P | P | 20001116 |
| US 2000-248794P | P | 20001116 |
| US 2000-248795P | P | 20001116 |
| US 2000-248796P | P | 20001116 |
| US 2000-248797P | P | 20001116 |
| US 2001-933708 | A2 | 20010822 |
| US 2001-986426 | A2 | 20011108 |
| US 2001-987458 | B2 | 20011114 |
| WO 2001-US43089 | B2 | 20011114 |
| US 2001-988034 | B2 | 20011116 |
| US 2001-988071 | B2 | 20011116 |
| WO 2001-US43115 | B2 | 20011116 |
| WO 2001-US43117 | B2 | 20011116 |
| US 2002-358381P | P | 20020222 |
| US 2002-366258P | P | 20020322 |

FAN 2003:202410
PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

PI

WO 2003020200
WO 2003020200

A2
A3

20030313
20030912

WO 2001-US43117

20011116

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

| | | |
|-----------------|---|----------|
| US 2000-248600P | P | 20001116 |
| US 2000-248601P | P | 20001116 |
| US 2000-248603P | P | 20001116 |
| US 2000-248604P | P | 20001116 |
| US 2000-248606P | P | 20001116 |
| US 2000-248607P | P | 20001116 |
| US 2000-248608P | P | 20001116 |
| US 2000-248609P | P | 20001116 |
| US 2000-248611P | P | 20001116 |
| US 2000-248689P | P | 20001116 |
| US 2000-248691P | P | 20001116 |
| US 2000-248692P | P | 20001116 |
| US 2000-248693P | P | 20001116 |
| US 2000-248694P | P | 20001116 |
| US 2000-248695P | P | 20001116 |
| US 2000-248696P | P | 20001116 |
| US 2000-248697P | P | 20001116 |
| US 2000-248698P | P | 20001116 |
| US 2000-248701P | P | 20001116 |

| | | | | |
|------------|----|-----------------|---|------------|
| | | US 2000-248702P | P | 20001116 |
| | | US 2000-248703P | P | 20001116 |
| | | US 2000-248704P | P | 20001116 |
| | | US 2000-248705P | P | 20001116 |
| | | US 2000-248706P | P | 20001116 |
| | | US 2000-248707P | P | 20001116 |
| | | US 2000-248708P | P | 20001116 |
| | | US 2000-248709P | P | 20001116 |
| | | US 2000-248710P | P | 20001116 |
| | | US 2000-248711P | P | 20001116 |
| | | US 2000-248712P | P | 20001116 |
| CA 2429345 | AA | 20030313 | CA 2001-2429345 | 20011116 |
| | | US 2000-248600P | P | 20001116 |
| | | US 2000-248601P | P | 20001116 |
| | | US 2000-248603P | P | 20001116 |
| | | US 2000-248604P | P | 20001116 |
| | | US 2000-248606P | P | 20001116 |
| | | US 2000-248607P | P | 20001116 |
| | | US 2000-248608P | P | 20001116 |
| | | US 2000-248609P | P | 20001116 |
| | | US 2000-248611P | P | 20001116 |
| | | US 2000-248686P | P | 20001116 |
| | | US 2000-248688P | P | 20001116 |
| | | US 2000-248689P | P | 20001116 |
| | | US 2000-248691P | P | 20001116 |
| | | US 2000-248692P | P | 20001116 |
| | | US 2000-248693P | P | 20001116 |
| | | US 2000-248694P | P | 20001116 |
| | | US 2000-248695P | P | 20001116 |
| | | US 2000-248696P | P | 20001116 |
| | | US 2000-248697P | P | 20001116 |
| | | US 2000-248698P | P | 20001116 |
| | | US 2000-248701P | P | 20001116 |
| | | US 2000-248702P | P | 20001116 |
| | | US 2000-248703P | P | 20001116 |
| | | US 2000-248704P | P | 20001116 |
| | | US 2000-248705P | P | 20001116 |
| | | US 2000-248706P | P | 20001116 |
| | | US 2000-248707P | P | 20001116 |
| | | US 2000-248708P | P | 20001116 |
| | | US 2000-248709P | P | 20001116 |
| | | US 2000-248710P | P | 20001116 |
| | | US 2000-248711P | P | 20001116 |
| | | US 2000-248712P | P | 20001116 |
| | | US 2000-248714P | P | 20001116 |
| | | US 2000-248715P | P | 20001116 |
| | | US 2000-248716P | P | 20001116 |
| | | US 2000-248717P | P | 20001116 |
| | | US 2000-248718P | P | 20001116 |
| | | US 2000-248719P | P | 20001116 |
| | | US 2000-248720P | P | 20001116 |
| | | US 2000-248748P | P | 20001116 |
| | | WO 2001-US43117 | W | 20011116 |
| EP 1357928 | A2 | 20031105 | EP 2001-273387 | 20011116 |
| | | | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | |
| | | | US 2000-248705P | P 20001116 |
| | | | US 2001-248664P | P 20011116 |
| | | | US 2001-248665P | P 20011116 |
| | | | US 2001-248666P | P 20011116 |
| | | | US 2001-248667P | P 20011116 |

JP 2006516947

T2

20060713

| | | |
|-----------------|---|----------|
| US 2001-248668P | P | 20011116 |
| US 2001-248669P | P | 20011116 |
| US 2001-248671P | P | 20011116 |
| US 2001-248672P | P | 20011116 |
| US 2001-248673P | P | 20011116 |
| US 2001-248674P | P | 20011116 |
| US 2001-248675P | P | 20011116 |
| US 2001-248676P | P | 20011116 |
| US 2001-248677P | P | 20011116 |
| US 2001-248678P | P | 20011116 |
| US 2001-248679P | P | 20011116 |
| US 2001-248680P | P | 20011116 |
| US 2001-248681P | P | 20011116 |
| US 2001-248682P | P | 20011116 |
| US 2001-248683P | P | 20011116 |
| US 2001-248684P | P | 20011116 |
| US 2001-248765P | P | 20011116 |
| US 2001-248766P | P | 20011116 |
| US 2001-248767P | P | 20011116 |
| US 2001-248773P | P | 20011116 |
| US 2001-248774P | P | 20011116 |
| US 2001-248775P | P | 20011116 |
| US 2001-248778P | P | 20011116 |
| US 2001-248780P | P | 20011116 |
| US 2001-248781P | P | 20011116 |
| US 2001-248783P | P | 20011116 |
| US 2001-248784P | P | 20011116 |
| US 2001-248785P | P | 20011116 |
| US 2001-248786P | P | 20011116 |
| US 2001-248787P | P | 20011116 |
| US 2001-248790P | P | 20011116 |
| US 2001-248791P | P | 20011116 |
| US 2001-248792P | P | 20011116 |
| US 2001-248793P | P | 20011116 |
| US 2001-248833P | P | 20011116 |
| US 2001-248848P | P | 20011116 |
| US 2001-248849P | P | 20011116 |
| WO 2001-US43117 | W | 20011116 |
| JP 2003-524514 | | 20011116 |
| US 2000-248600P | P | 20001116 |
| US 2000-248601P | P | 20001116 |
| US 2000-248603P | P | 20001116 |
| US 2000-248604P | P | 20001116 |
| US 2000-248606P | P | 20001116 |
| US 2000-248607P | P | 20001116 |
| US 2000-248608P | P | 20001116 |
| US 2000-248609P | P | 20001116 |
| US 2000-248611P | P | 20001116 |
| US 2000-248695P | P | 20001116 |
| US 2000-248696P | P | 20001116 |
| US 2000-248697P | P | 20001116 |
| US 2000-248698P | P | 20001116 |
| US 2000-248701P | P | 20001116 |
| US 2000-248702P | P | 20001116 |
| US 2000-248703P | P | 20001116 |
| US 2000-248704P | P | 20001116 |
| US 2000-248705P | P | 20001116 |
| US 2000-248706P | P | 20001116 |
| US 2000-248707P | P | 20001116 |
| US 2000-248708P | P | 20001116 |
| US 2000-248709P | P | 20001116 |

US 2004063628
US 7060708

A1 20040401
B2 20060613

| | |
|-----------------|-------------|
| US 2000-248711P | P 20001116 |
| US 2000-248712P | P 20001116 |
| US 2001-248664P | P 20011116 |
| US 2001-248665P | P 20011116 |
| US 2001-248666P | P 20011116 |
| US 2001-248667P | P 20011116 |
| US 2001-248668P | P 20011116 |
| US 2001-248669P | P 20011116 |
| US 2001-248671P | P 20011116 |
| US 2001-248673P | P 20011116 |
| US 2001-248674P | P 20011116 |
| US 2001-248675P | P 20011116 |
| US 2001-248676P | P 20011116 |
| US 2001-248677P | P 20011116 |
| US 2001-248678P | P 20011116 |
| US 2001-248679P | P 20011116 |
| US 2001-248680P | P 20011116 |
| US 2001-248681P | P 20011116 |
| US 2001-248682P | P 20011116 |
| US 2001-248683P | P 20011116 |
| US 2001-248684P | P 20011116 |
| US 2001-248790P | P 20011116 |
| US 2001-248792P | P 20011116 |
| US 2001-248793P | P 20011116 |
| US 2001-248848P | P 20011116 |
| US 2001-248849P | P 20011116 |
| WO 2001-US43117 | W 20011116 |
| US 2002-156527 | 20020529 |
| US 1999-265415 | B2 19990310 |
| US 1999-411238 | B2 19991004 |
| WO 2000-US5693 | A 20000306 |
| US 2000-642820 | A2 20000822 |
| US 2000-248620P | P 20001116 |
| US 2000-248656P | P 20001116 |
| US 2000-248658P | P 20001116 |
| US 2000-248659P | P 20001116 |
| US 2000-248660P | P 20001116 |
| US 2000-248662P | P 20001116 |
| US 2000-248663P | P 20001116 |
| US 2000-248685P | P 20001116 |
| US 2000-248737P | P 20001116 |
| US 2000-248738P | P 20001116 |
| US 2000-248764P | P 20001116 |
| US 2000-248767P | P 20001116 |
| US 2000-248768P | P 20001116 |
| US 2000-248769P | P 20001116 |
| US 2000-248770P | P 20001116 |
| US 2000-248771P | P 20001116 |
| US 2000-248772P | P 20001116 |
| US 2000-248774P | P 20001116 |
| US 2000-248776P | P 20001116 |
| US 2000-248777P | P 20001116 |
| US 2000-248778P | P 20001116 |
| US 2000-248779P | P 20001116 |
| US 2000-248782P | P 20001116 |
| US 2000-248787P | P 20001116 |
| US 2000-248794P | P 20001116 |
| US 2000-248795P | P 20001116 |
| US 2000-248796P | P 20001116 |
| US 2000-248797P | P 20001116 |

| | | | | | |
|---------------|---------------|--|----------|-----------------|-------------|
| | | | | US 2001-933708 | A2 20010822 |
| | | | | US 2001-986426 | A2 20011108 |
| | | | | US 2001-987458 | B2 20011114 |
| | | | | WO 2001-US43089 | B2 20011114 |
| | | | | US 2001-988034 | B2 20011116 |
| | | | | US 2001-988071 | B2 20011116 |
| | | | | WO 2001-US43115 | B2 20011116 |
| | | | | WO 2001-US43117 | B2 20011116 |
| | | | | US 2002-358381P | P 20020222 |
| | | | | US 2002-366258P | P 20020322 |
| FAN | 2003:334829 | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| PI | WO 2003034980 | A2 | 20030501 | WO 2001-US43089 | 20011114 |
| | WO 2003034980 | C1 | 20031120 | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| | CA 2428971 | AA | 20030501 | US 2000-274622P | P 20001114 |
| | | | | CA 2001-2428971 | 20011114 |
| | | | | US 2000-247622P | P 20001114 |
| | | | | WO 2001-US43089 | W 20011114 |
| EP 1401374 | | A1 | 20040331 | EP 2001-274606 | 20011114 |
| | R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | |
| | | | | US 2000-274622P | P 20001114 |
| | | | | WO 2001-US43089 | W 20011114 |
| JP 2006516948 | | T2 | 20060713 | JP 2003-537549 | 20011114 |
| | | | | US 2000-274622P | P 20001114 |
| | | | | WO 2001-US43089 | W 20011114 |
| US 2004063628 | | A1 | 20040401 | US 2002-156527 | 20020529 |
| US 7060708 | | B2 | 20060613 | | |
| | | | | US 1999-265415 | B2 19990310 |
| | | | | US 1999-411238 | B2 19991004 |
| | | | | WO 2000-US5693 | A 20000306 |
| | | | | US 2000-642820 | A2 20000822 |
| | | | | US 2000-248620P | P 20001116 |
| | | | | US 2000-248656P | P 20001116 |
| | | | | US 2000-248658P | P 20001116 |
| | | | | US 2000-248659P | P 20001116 |
| | | | | US 2000-248660P | P 20001116 |
| | | | | US 2000-248662P | P 20001116 |
| | | | | US 2000-248663P | P 20001116 |
| | | | | US 2000-248685P | P 20001116 |
| | | | | US 2000-248737P | P 20001116 |
| | | | | US 2000-248738P | P 20001116 |
| | | | | US 2000-248764P | P 20001116 |
| | | | | US 2000-248767P | P 20001116 |
| | | | | US 2000-248768P | P 20001116 |
| | | | | US 2000-248769P | P 20001116 |
| | | | | US 2000-248770P | P 20001116 |
| | | | | US 2000-248771P | P 20001116 |
| | | | | US 2000-248772P | P 20001116 |
| | | | | US 2000-248774P | P 20001116 |

| | | | | | |
|-----|---------------|--|----------|-----------------|-------------|
| | | | | US 2000-248776P | P 20001116 |
| | | | | US 2000-248777P | P 20001116 |
| | | | | US 2000-248778P | P 20001116 |
| | | | | US 2000-248779P | P 20001116 |
| | | | | US 2000-248782P | P 20001116 |
| | | | | US 2000-248787P | P 20001116 |
| | | | | US 2000-248794P | P 20001116 |
| | | | | US 2000-248795P | P 20001116 |
| | | | | US 2000-248796P | P 20001116 |
| | | | | US 2000-248797P | P 20001116 |
| | | | | US 2001-933708 | A2 20010822 |
| | | | | US 2001-986426 | A2 20011108 |
| | | | | US 2001-987458 | B2 20011114 |
| | | | | WO 2001-US43089 | B2 20011114 |
| | | | | US 2001-988034 | B2 20011116 |
| | | | | US 2001-988071 | B2 20011116 |
| | | | | WO 2001-US43115 | B2 20011116 |
| | | | | WO 2001-US43117 | B2 20011116 |
| | | | | US 2002-358381P | P 20020222 |
| | | | | US 2002-366258P | P 20020322 |
| FAN | 2003:696688 | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| PI | WO 2003072046 | A2 | 20030904 | WO 2003-US5525 | 20030224 |
| | WO 2003072046 | A3 | 20050310 | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| | | | | US 2002-358368P | P 20020222 |
| | | | | US 2002-362082P | P 20020307 |
| CA | 2477004 | AA | 20030904 | CA 2003-2477004 | 20030224 |
| | | | | US 2002-358368P | P 20020222 |
| | | | | US 2002-362082P | P 20020307 |
| | | | | WO 2003-US5525 | W 20030224 |
| AU | 2003219863 | A1 | 20030909 | AU 2003-219863 | 20030224 |
| | | | | US 2002-358368P | P 20020222 |
| | | | | US 2002-362082P | P 20020307 |
| | | | | WO 2003-US5525 | W 20030224 |
| EP | 1531844 | A2 | 20050525 | EP 2003-716144 | 20030224 |
| | R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | |
| | | | | US 2002-358368P | P 20020222 |
| | | | | US 2002-362082P | P 20020307 |
| | | | | WO 2003-US5525 | W 20030224 |
| JP | 2005524648 | T2 | 20050818 | JP 2003-570793 | 20030224 |
| | | | | US 2002-358368P | P 20020222 |
| | | | | US 2002-362082P | P 20020307 |
| | | | | WO 2003-US5525 | W 20030224 |
| CN | 1720059 | A | 20060111 | CN 2003-808716 | 20030224 |
| | | | | US 2002-358368P | P 20020222 |
| | | | | US 2002-362082P | P 20020307 |
| US | 2005054561 | A1 | 20050310 | US 2004-858526 | 20040601 |
| US | 7105486 | B2 | 20060912 | | |
| | | | | US 2002-358368P | P 20020222 |

| | | | | | | | |
|---------------|---------------|--|-------|----------|-----------------|----------|----------|
| | | | | | US 2002-362082P | P | 20020307 |
| | | | | | WO 2003-US5525 | A2 | 20030224 |
| | | | | | US 2003-473929P | P | 20030529 |
| | | | | | US 2004-567801P | P | 20040505 |
| US 2005080012 | A1 | 20050414 | | | US 2004-923257 | | 20040823 |
| | | | | | US 2002-358368P | P | 20020222 |
| | | | | | US 2002-362082P | P | 20020307 |
| | | | | | WO 2003-US5525 | A2 | 20030224 |
| US 2005176645 | A1 | 20050811 | | | US 2004-953116 | | 20040930 |
| | | | | | US 2002-358368P | P | 20020222 |
| | | | | | US 2002-362082P | P | 20020307 |
| | | | | | WO 2003-US5525 | A2 | 20030224 |
| | | | | | US 2003-507012P | P | 20030930 |
| | | | | | US 2004-567800P | P | 20040505 |
| | | | | | US 2004-568011P | P | 20040505 |
| | | | | | US 2004-927257 | A2 | 20040827 |
| US 2006014697 | A1 | 20060119 | | | US 2005-89056 | | 20050325 |
| | | | | | US 2001-933708 | A2 | 20010822 |
| | | | | | US 2002-358368P | P | 20020222 |
| | | | | | US 2002-358381P | P | 20020222 |
| | | | | | US 2002-362082P | P | 20020307 |
| | | | | | US 2002-366258P | P | 20020322 |
| | | | | | US 2002-156527 | A2 | 20020529 |
| | | | | | WO 2003-US5525 | A2 | 20030224 |
| | | | | | US 2003-507012P | P | 20030930 |
| | | | | | US 2004-567800P | P | 20040505 |
| | | | | | US 2004-567802P | P | 20040505 |
| | | | | | US 2004-568011P | P | 20040505 |
| | | | | | US 2004-923088 | A2 | 20040823 |
| | | | | | US 2004-923257 | A2 | 20040823 |
| | | | | | US 2004-953110 | A2 | 20040930 |
| | | | | | US 2004-953111 | A2 | 20040930 |
| | | | | | US 2004-953116 | A2 | 20040930 |
| | | | | | US 2004-953119 | A2 | 20040930 |
| | | | | | US 2004-955006 | A2 | 20040930 |
| | | | | | WO 2004-US32131 | A2 | 20040930 |
| FAN | 2003:696689 | | | | | | |
| | PATENT NO. | | KIND | DATE | APPLICATION NO. | DATE | |
| | ----- | | ----- | ----- | ----- | ----- | |
| PI | WO 2003072047 | | A2 | 20030904 | WO 2003-US5526 | 20030224 | |
| | WO 2003072047 | | A3 | 20040617 | | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | | |
| | | | | | US 2002-358381P | P | 20020222 |
| | | | | | US 2002-366258P | P | 20020322 |
| | | | | | US 2002-136433 | A | 20020502 |
| | | | | | US 2002-156527 | A | 20020529 |
| US 2004087483 | A1 | 20040506 | | | US 2002-136433 | | 20020502 |
| | | | | | US 2000-642820 | A2 | 20000822 |
| | | | | | US 2000-248607P | P | 20001116 |
| | | | | | US 2001-933708 | A2 | 20010822 |
| US 2004063628 | A1 | 20040401 | | | US 2002-156527 | | 20020529 |
| US 7060708 | B2 | 20060613 | | | | | |

| | | | | |
|---------------|---------------|--|-----------------|-----------------|
| | | | US 1999-265415 | B2 19990310 |
| | | | US 1999-411238 | B2 19991004 |
| | | | WO 2000-US5693 | A 20000306 |
| | | | US 2000-642820 | A2 20000822 |
| | | | US 2000-248620P | P 20001116 |
| | | | US 2000-248656P | P 20001116 |
| | | | US 2000-248658P | P 20001116 |
| | | | US 2000-248659P | P 20001116 |
| | | | US 2000-248660P | P 20001116 |
| | | | US 2000-248662P | P 20001116 |
| | | | US 2000-248663P | P 20001116 |
| | | | US 2000-248685P | P 20001116 |
| | | | US 2000-248737P | P 20001116 |
| | | | US 2000-248738P | P 20001116 |
| | | | US 2000-248764P | P 20001116 |
| | | | US 2000-248767P | P 20001116 |
| | | | US 2000-248768P | P 20001116 |
| | | | US 2000-248769P | P 20001116 |
| | | | US 2000-248770P | P 20001116 |
| | | | US 2000-248771P | P 20001116 |
| | | | US 2000-248772P | P 20001116 |
| | | | US 2000-248774P | P 20001116 |
| | | | US 2000-248776P | P 20001116 |
| | | | US 2000-248777P | P 20001116 |
| | | | US 2000-248778P | P 20001116 |
| | | | US 2000-248779P | P 20001116 |
| | | | US 2000-248782P | P 20001116 |
| | | | US 2000-248787P | P 20001116 |
| | | | US 2000-248794P | P 20001116 |
| | | | US 2000-248795P | P 20001116 |
| | | | US 2000-248796P | P 20001116 |
| | | | US 2000-248797P | P 20001116 |
| | | | US 2001-933708 | A2 20010822 |
| | | | US 2001-986426 | A2 20011108 |
| | | | US 2001-987458 | B2 20011114 |
| | | | WO 2001-US43089 | B2 20011114 |
| | | | US 2001-988034 | B2 20011116 |
| | | | US 2001-988071 | B2 20011116 |
| | | | WO 2001-US43115 | B2 20011116 |
| | | | WO 2001-US43117 | B2 20011116 |
| | | | US 2002-358381P | P 20020222 |
| | | | US 2002-366258P | P 20020322 |
| AU 2003216382 | A1 | 20030909 | AU 2003-216382 | 20030224 |
| | | | US 2002-358381P | P 20020222 |
| | | | US 2002-366258P | P 20020322 |
| | | | US 2002-136433 | A 20020502 |
| | | | US 2002-156527 | A 20020529 |
| | | | WO 2003-US5526 | W 20030224 |
| FAN | 2003:777522 | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. |
| | ----- | ---- | ----- | ----- |
| PI | WO 2003079972 | A2 | 20031002 | WO 2003-US5524 |
| | WO 2003079972 | A3 | 20040318 | 20030224 |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, | | |

| FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
|---|----|----------|-----------------------------|
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-366258P P 20020322 |
| | | | US 2002-156527 A 20020529 |
| US 2004063628 | A1 | 20040401 | US 2002-156527 20020529 |
| US 7060708 | B2 | 20060613 | |
| | | | US 1999-265415 B2 19990310 |
| | | | US 1999-411238 B2 19991004 |
| | | | WO 2000-US5693 A 20000306 |
| | | | US 2000-642820 A2 20000822 |
| | | | US 2000-248620P P 20001116 |
| | | | US 2000-248656P P 20001116 |
| | | | US 2000-248658P P 20001116 |
| | | | US 2000-248659P P 20001116 |
| | | | US 2000-248660P P 20001116 |
| | | | US 2000-248662P P 20001116 |
| | | | US 2000-248663P P 20001116 |
| | | | US 2000-248685P P 20001116 |
| | | | US 2000-248737P P 20001116 |
| | | | US 2000-248738P P 20001116 |
| | | | US 2000-248764P P 20001116 |
| | | | US 2000-248767P P 20001116 |
| | | | US 2000-248768P P 20001116 |
| | | | US 2000-248769P P 20001116 |
| | | | US 2000-248770P P 20001116 |
| | | | US 2000-248771P P 20001116 |
| | | | US 2000-248772P P 20001116 |
| | | | US 2000-248774P P 20001116 |
| | | | US 2000-248776P P 20001116 |
| | | | US 2000-248777P P 20001116 |
| | | | US 2000-248778P P 20001116 |
| | | | US 2000-248779P P 20001116 |
| | | | US 2000-248782P P 20001116 |
| | | | US 2000-248787P P 20001116 |
| | | | US 2000-248794P P 20001116 |
| | | | US 2000-248795P P 20001116 |
| | | | US 2000-248796P P 20001116 |
| | | | US 2000-248797P P 20001116 |
| | | | US 2001-933708 A2 20010822 |
| | | | US 2001-986426 A2 20011108 |
| | | | US 2001-987458 B2 20011114 |
| | | | WO 2001-US43089 B2 20011114 |
| | | | US 2001-988034 B2 20011116 |
| | | | US 2001-988071 B2 20011116 |
| | | | WO 2001-US43115 B2 20011116 |
| | | | WO 2001-US43117 B2 20011116 |
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-366258P P 20020322 |
| CA 2477088 | AA | 20031002 | CA 2003-2477088 20030224 |
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-366258P P 20020322 |
| | | | US 2002-156527 A 20020529 |
| | | | WO 2003-US5524 W 20030224 |
| AU 2003217676 | A1 | 20031008 | AU 2003-217676 20030224 |
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-366258P P 20020322 |
| | | | US 2002-156527 A 20020529 |
| | | | WO 2003-US5524 W 20030224 |
| EP 1490090 | A2 | 20041229 | EP 2003-713634 20030224 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, | | | |

| | | | | |
|---------------|----|--|-----------------|------------|
| | | IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | |
| | | | US 2002-358381P | P 20020222 |
| | | | US 2002-366258P | P 20020322 |
| | | | US 2002-156527 | A 20020529 |
| | | | WO 2003-US5524 | W 20030224 |
| JP 2005524677 | T2 | 20050818 | JP 2003-577805 | 20030224 |
| | | | US 2002-358381P | P 20020222 |
| | | | US 2002-366258P | P 20020322 |
| | | | US 2002-156527 | A 20020529 |
| | | | WO 2003-US5524 | W 20030224 |

| | | | | |
|-----|---|------|----------|-----------------|
| FAN | 2003:971909 | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. |
| | ----- | ---- | ----- | ----- |
| PI | WO 2003101476 | A1 | 20031211 | WO 2003-US17009 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | 20030529 |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| | US 2004063628 | A1 | 20040401 | US 2002-156527 |
| | US 7060708 | B2 | 20060613 | US 2002-156527 |
| | | | | A 20020529 |
| | | | | 20020529 |
| | | | | US 1999-265415 |
| | | | | B2 19990310 |
| | | | | US 1999-411238 |
| | | | | B2 19991004 |
| | | | | WO 2000-US5693 |
| | | | | A 20000306 |
| | | | | US 2000-642820 |
| | | | | A2 20000822 |
| | | | | US 2000-248620P |
| | | | | P 20001116 |
| | | | | US 2000-248656P |
| | | | | P 20001116 |
| | | | | US 2000-248658P |
| | | | | P 20001116 |
| | | | | US 2000-248659P |
| | | | | P 20001116 |
| | | | | US 2000-248660P |
| | | | | P 20001116 |
| | | | | US 2000-248662P |
| | | | | P 20001116 |
| | | | | US 2000-248663P |
| | | | | P 20001116 |
| | | | | US 2000-248685P |
| | | | | P 20001116 |
| | | | | US 2000-248737P |
| | | | | P 20001116 |
| | | | | US 2000-248738P |
| | | | | P 20001116 |
| | | | | US 2000-248764P |
| | | | | P 20001116 |
| | | | | US 2000-248767P |
| | | | | P 20001116 |
| | | | | US 2000-248768P |
| | | | | P 20001116 |
| | | | | US 2000-248769P |
| | | | | P 20001116 |
| | | | | US 2000-248770P |
| | | | | P 20001116 |
| | | | | US 2000-248771P |
| | | | | P 20001116 |
| | | | | US 2000-248772P |
| | | | | P 20001116 |
| | | | | US 2000-248774P |
| | | | | P 20001116 |
| | | | | US 2000-248776P |
| | | | | P 20001116 |
| | | | | US 2000-248777P |
| | | | | P 20001116 |
| | | | | US 2000-248778P |
| | | | | P 20001116 |
| | | | | US 2000-248779P |
| | | | | P 20001116 |
| | | | | US 2000-248782P |
| | | | | P 20001116 |
| | | | | US 2000-248787P |
| | | | | P 20001116 |
| | | | | US 2000-248794P |
| | | | | P 20001116 |
| | | | | US 2000-248795P |
| | | | | P 20001116 |
| | | | | US 2000-248796P |
| | | | | P 20001116 |
| | | | | US 2000-248797P |
| | | | | P 20001116 |
| | | | | US 2001-933708 |
| | | | | A2 20010822 |
| | | | | US 2001-986426 |
| | | | | A2 20011108 |

| | | | | | |
|-----|---------------|------|----------|---|-------------|
| | | | | US 2001-987458 | B2 20011114 |
| | | | | WO 2001-US43089 | B2 20011114 |
| | | | | US 2001-988034 | B2 20011116 |
| | | | | US 2001-988071 | B2 20011116 |
| | | | | WO 2001-US43115 | B2 20011116 |
| | | | | WO 2001-US43117 | B2 20011116 |
| | | | | US 2002-358381P | P 20020222 |
| | | | | US 2002-366258P | P 20020322 |
| | AU 2003240949 | A1 | 20031219 | AU 2003-240949 | 20030529 |
| | | | | US 2002-156527 | A 20020529 |
| | | | | WO 2003-US17009 | W 20030529 |
| FAN | 2004:269853 | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| | ----- | ---- | ----- | ----- | ----- |
| PI | US 2004063628 | A1 | 20040401 | US 2002-156527 | 20020529 |
| | US 7060708 | B2 | 20060613 | | |
| | | | | US 1999-265415 | B2 19990310 |
| | | | | US 1999-411238 | B2 19991004 |
| | | | | WO 2000-US5693 | A 20000306 |
| | | | | US 2000-642820 | A2 20000822 |
| | | | | US 2000-248620P | P 20001116 |
| | | | | US 2000-248656P | P 20001116 |
| | | | | US 2000-248658P | P 20001116 |
| | | | | US 2000-248659P | P 20001116 |
| | | | | US 2000-248660P | P 20001116 |
| | | | | US 2000-248662P | P 20001116 |
| | | | | US 2000-248663P | P 20001116 |
| | | | | US 2000-248685P | P 20001116 |
| | | | | US 2000-248737P | P 20001116 |
| | | | | US 2000-248738P | P 20001116 |
| | | | | US 2000-248764P | P 20001116 |
| | | | | US 2000-248767P | P 20001116 |
| | | | | US 2000-248768P | P 20001116 |
| | | | | US 2000-248769P | P 20001116 |
| | | | | US 2000-248770P | P 20001116 |
| | | | | US 2000-248771P | P 20001116 |
| | | | | US 2000-248772P | P 20001116 |
| | | | | US 2000-248774P | P 20001116 |
| | | | | US 2000-248776P | P 20001116 |
| | | | | US 2000-248777P | P 20001116 |
| | | | | US 2000-248778P | P 20001116 |
| | | | | US 2000-248779P | P 20001116 |
| | | | | US 2000-248782P | P 20001116 |
| | | | | US 2000-248787P | P 20001116 |
| | | | | US 2000-248794P | P 20001116 |
| | | | | US 2000-248795P | P 20001116 |
| | | | | US 2000-248796P | P 20001116 |
| | | | | US 2000-248797P | P 20001116 |
| | | | | US 2001-933708 | A2 20010822 |
| | | | | US 2001-986426 | A2 20011108 |
| | | | | US 2001-987458 | B2 20011114 |
| | | | | WO 2001-US43089 | B2 20011114 |
| | | | | US 2001-988034 | B2 20011116 |
| | | | | US 2001-988071 | B2 20011116 |
| | | | | WO 2001-US43115 | B2 20011116 |
| | | | | WO 2001-US43117 | B2 20011116 |
| | | | | US 2002-358381P | P 20020222 |
| | | | | US 2002-366258P | P 20020322 |
| | WO 2000052078 | A1 | 20000908 | WO 2000-US5693 | 20000306 |
| | W: | | | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, | |
| | | | | CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, | |

IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD
 , MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
 SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
 DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
 CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

| | | | | | |
|---------------|----|----------|-----------------|----|----------|
| US 6716452 | B1 | 20040406 | US 1999-123146P | P | 19990305 |
| US 2002099013 | A1 | 20020725 | US 2000-642820 | | 20000822 |
| | | | US 2001-933708 | | 20010822 |
| | | | US 2000-247556P | P | 20001114 |
| | | | US 2000-247558P | P | 20001114 |
| | | | US 2000-247559P | P | 20001114 |
| | | | US 2000-247560P | P | 20001114 |
| | | | US 2000-247561P | P | 20001114 |
| | | | US 2000-247594P | P | 20001114 |
| | | | US 2000-247595P | P | 20001114 |
| | | | US 2000-247606P | P | 20001114 |
| | | | US 2000-247607P | P | 20001114 |
| | | | US 2000-247608P | P | 20001114 |
| | | | US 2000-247609P | P | 20001114 |
| | | | US 2000-247610P | P | 20001114 |
| | | | US 2000-247611P | P | 20001114 |
| | | | US 2000-247612P | P | 20001114 |
| | | | US 2000-247620P | P | 20001114 |
| | | | US 2000-247621P | P | 20001114 |
| | | | US 2000-247634P | P | 20001114 |
| | | | US 2000-247635P | P | 20001114 |
| | | | US 2000-247698P | P | 20001114 |
| | | | US 2000-247699P | P | 20001114 |
| | | | US 2000-247700P | P | 20001114 |
| | | | US 2000-247701P | P | 20001114 |
| | | | US 2000-247702P | P | 20001114 |
| | | | US 2000-247797P | P | 20001114 |
| | | | US 2000-247798P | P | 20001114 |
| | | | US 2000-247799P | P | 20001114 |
| | | | US 2000-247800P | P | 20001114 |
| | | | US 2000-247801P | P | 20001114 |
| | | | US 2000-247802P | P | 20001114 |
| | | | US 2000-247803P | P | 20001114 |
| | | | US 2000-247804P | P | 20001114 |
| | | | US 2000-247805P | P | 20001114 |
| | | | US 2000-247807P | P | 20001114 |
| | | | US 2000-247832P | P | 20001114 |
| | | | US 2000-247833P | P | 20001114 |
| | | | US 2000-247926P | P | 20001114 |
| | | | US 2000-247927P | P | 20001114 |
| | | | US 2000-247928P | P | 20001114 |
| | | | US 2000-247929P | P | 20001114 |
| | | | US 2000-247930P | P | 20001114 |
| US 2002128177 | A1 | 20020912 | US 2001-986426 | | 20011108 |
| US 7018654 | B2 | 20060328 | | | |
| | | | US 1999-123146P | P | 19990305 |
| | | | US 1999-265415 | B2 | 19990310 |
| | | | US 1999-411238 | B2 | 19991004 |
| | | | WO 2000-US5693 | W | 20000306 |
| | | | US 2001-959396 | B2 | 20011024 |
| WO 2003034980 | A2 | 20030501 | WO 2001-US43089 | | 20011114 |
| WO 2003034980 | C1 | 20031120 | | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,

LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,
 UG, US, UZ, VN, YU, ZA, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG,
 KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR,
 IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN,
 GQ, GW, ML, MR, NE, SN, TD, TG

US 2000-274622P P 20001114
 WO 2002051432 A1 20020704 WO 2001-US43115 20011116
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,
 UG, US, UZ, VN, YU, ZA, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
 CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

WO 2003020200 A2 20030313 WO 2001-US43117 20011116
 WO 2003020200 A3 20030912
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,
 UG, US, UZ, VN, YU, ZA, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,
 GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,
 GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2000-248600P P 20001116
 US 2000-248601P P 20001116
 US 2000-248603P P 20001116
 US 2000-248604P P 20001116
 US 2000-248606P P 20001116
 US 2000-248607P P 20001116
 US 2000-248608P P 20001116
 US 2000-248609P P 20001116
 US 2000-248611P P 20001116
 US 2000-248689P P 20001116
 US 2000-248691P P 20001116
 US 2000-248692P P 20001116
 US 2000-248693P P 20001116
 US 2000-248694P P 20001116
 US 2000-248695P P 20001116
 US 2000-248696P P 20001116
 US 2000-248697P P 20001116
 US 2000-248698P P 20001116
 US 2000-248701P P 20001116
 US 2000-248702P P 20001116
 US 2000-248703P P 20001116
 US 2000-248704P P 20001116
 US 2000-248705P P 20001116
 US 2000-248706P P 20001116
 US 2000-248707P P 20001116
 US 2000-248708P P 20001116
 US 2000-248709P P 20001116
 US 2000-248710P P 20001116
 US 2000-248711P P 20001116
 US 2000-248712P P 20001116
 WO 2003072047 A2 20030904 WO 2003-US5526 20030224

| | | | |
|---------------|--|----------|----------------------------|
| WO 2003072047 | A3 | 20040617 | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | |
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-366258P P 20020322 |
| | | | US 2002-136433 A 20020502 |
| | | | US 2002-156527 A 20020529 |
| AU 2003216382 | A1 | 20030909 | AU 2003-216382 20030224 |
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-366258P P 20020322 |
| | | | US 2002-136433 A 20020502 |
| | | | US 2002-156527 A 20020529 |
| | | | WO 2003-US5526 W 20030224 |
| CA 2477088 | AA | 20031002 | CA 2003-2477088 20030224 |
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-366258P P 20020322 |
| | | | US 2002-156527 A 20020529 |
| | | | WO 2003-US5524 W 20030224 |
| WO 2003079972 | A2 | 20031002 | WO 2003-US5524 20030224 |
| WO 2003079972 | A3 | 20040318 | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | |
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-366258P P 20020322 |
| | | | US 2002-156527 A 20020529 |
| AU 2003217676 | A1 | 20031008 | AU 2003-217676 20030224 |
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-366258P P 20020322 |
| | | | US 2002-156527 A 20020529 |
| | | | WO 2003-US5524 W 20030224 |
| EP 1490090 | A2 | 20041229 | EP 2003-713634 20030224 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | |
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-366258P P 20020322 |
| | | | US 2002-156527 A 20020529 |
| | | | WO 2003-US5524 W 20030224 |
| CN 1649614 | A | 20050803 | CN 2003-808717 20030224 |
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-366258P P 20020322 |
| | | | US 2002-156527 A 20020529 |
| JP 2005524677 | T2 | 20050818 | JP 2003-577805 20030224 |
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-366258P P 20020322 |
| | | | US 2002-156527 A 20020529 |

| | | | | | |
|------------------|--|----------|-----------------|------|----------|
| WO 2003101476 | A1 | 20031211 | WO 2003-US5524 | W | 20030224 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | WO 2003-US17009 | | 20030529 |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2003240949 | A1 | 20031219 | US 2002-156527 | A | 20020529 |
| | | | AU 2003-240949 | | 20030529 |
| | | | US 2002-156527 | A | 20020529 |
| US 2004127397 | A1 | 20040701 | WO 2003-US17009 | W | 20030529 |
| | | | US 2003-727565 | | 20031205 |
| US 2006014697 | A1 | 20060119 | US 2000-642820 | A3 | 20000822 |
| | | | US 2005-89056 | | 20050325 |
| | | | US 2001-933708 | A2 | 20010822 |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-156527 | A2 | 20020529 |
| | | | WO 2003-US5525 | A2 | 20030224 |
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| | | | US 2004-567802P | P | 20040505 |
| | | | US 2004-568011P | P | 20040505 |
| | | | US 2004-923088 | A2 | 20040823 |
| | | | US 2004-923257 | A2 | 20040823 |
| | | | US 2004-953110 | A2 | 20040930 |
| | | | US 2004-953111 | A2 | 20040930 |
| | | | US 2004-953116 | A2 | 20040930 |
| | | | US 2004-953119 | A2 | 20040930 |
| | | | US 2004-955006 | A2 | 20040930 |
| | | | WO 2004-US32131 | A2 | 20040930 |
| FAN 2004:372841 | | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
| PI US 2004087483 | A1 | 20040506 | US 2002-136433 | | 20020502 |
| | | | US 2000-642820 | A2 | 20000822 |
| | | | US 2000-248607P | P | 20001116 |
| | | | US 2001-933708 | A2 | 20010822 |
| US 6716452 | B1 | 20040406 | US 2000-642820 | | 20000822 |
| US 2002099013 | A1 | 20020725 | US 2001-933708 | | 20010822 |
| | | | US 2000-247556P | P | 20001114 |
| | | | US 2000-247558P | P | 20001114 |
| | | | US 2000-247559P | P | 20001114 |
| | | | US 2000-247560P | P | 20001114 |
| | | | US 2000-247561P | P | 20001114 |
| | | | US 2000-247594P | P | 20001114 |
| | | | US 2000-247595P | P | 20001114 |
| | | | US 2000-247606P | P | 20001114 |
| | | | US 2000-247607P | P | 20001114 |
| | | | US 2000-247608P | P | 20001114 |
| | | | US 2000-247609P | P | 20001114 |
| | | | US 2000-247610P | P | 20001114 |
| | | | US 2000-247611P | P | 20001114 |
| | | | US 2000-247612P | P | 20001114 |

| | | | | | |
|---------------|--|----------|-----------------|-----------------|----------|
| | | | US 2000-247620P | P | 20001114 |
| | | | US 2000-247621P | P | 20001114 |
| | | | US 2000-247634P | P | 20001114 |
| | | | US 2000-247635P | P | 20001114 |
| | | | US 2000-247698P | P | 20001114 |
| | | | US 2000-247699P | P | 20001114 |
| | | | US 2000-247700P | P | 20001114 |
| | | | US 2000-247701P | P | 20001114 |
| | | | US 2000-247702P | P | 20001114 |
| | | | US 2000-247797P | P | 20001114 |
| | | | US 2000-247798P | P | 20001114 |
| | | | US 2000-247799P | P | 20001114 |
| | | | US 2000-247800P | P | 20001114 |
| | | | US 2000-247801P | P | 20001114 |
| | | | US 2000-247802P | P | 20001114 |
| | | | US 2000-247803P | P | 20001114 |
| | | | US 2000-247804P | P | 20001114 |
| | | | US 2000-247805P | P | 20001114 |
| | | | US 2000-247807P | P | 20001114 |
| | | | US 2000-247832P | P | 20001114 |
| | | | US 2000-247833P | P | 20001114 |
| | | | US 2000-247926P | P | 20001114 |
| | | | US 2000-247927P | P | 20001114 |
| | | | US 2000-247928P | P | 20001114 |
| | | | US 2000-247929P | P | 20001114 |
| | | | US 2000-247930P | P | 20001114 |
| WO 2003072047 | A2 | 20030904 | WO 2003-US5526 | | 20030224 |
| WO 2003072047 | A3 | 20040617 | | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-136433 | A | 20020502 |
| | | | US 2002-156527 | A | 20020529 |
| AU 2003216382 | A1 | 20030909 | AU 2003-216382 | | 20030224 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-136433 | A | 20020502 |
| | | | US 2002-156527 | A | 20020529 |
| | | | WO 2003-US5526 | W | 20030224 |
| US 2004127397 | A1 | 20040701 | US 2003-727565 | | 20031205 |
| | | | US 2000-642820 | A3 | 20000822 |
| FAN | 2005:14241 | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| PI | WO 2005000334 | A1 | 20050106 | WO 2004-US17204 | 20040601 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, | | | | |

AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

| | | | | | |
|---|------|----------|------------------|----|----------|
| AU 2004251647 | A1 | 20050106 | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| | | | AU 2004-251647 | | 20040601 |
| | | | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| CA 2527646 | AA | 20050106 | WO 2004-US17204 | W | 20040601 |
| | | | CA 2004-2527646 | | 20040601 |
| | | | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| | | | WO 2004-US17204 | W | 20040601 |
| US 2005038121 | A1 | 20050217 | US 2004-857619 | | 20040601 |
| | | | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| EP 1644019 | A1 | 20060412 | EP 2004-753925 | | 20040601 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK | | | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| | | | WO 2004-US17204 | W | 20040601 |
| BR 2004010792 | A | 20060801 | BR 2004-10792 | | 20040601 |
| | | | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| | | | WO 2004-US17204 | W | 20040601 |
| CN 1816346 | A | 20060809 | CN 2004-80019089 | | 20040601 |
| | | | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| | | | WO 2004-US17204 | W | 20040601 |
| NO 2005006211 | A | 20060227 | NO 2005-6211 | | 20051228 |
| | | | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| | | | WO 2004-US17204 | W | 20040601 |
| FAN 2005:220111 | | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
| PI US 2005054561 | A1 | 20050310 | US 2004-858526 | | 20040601 |
| US 7105486 | B2 | 20060912 | | | |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | WO 2003-US5525 | A2 | 20030224 |
| | | | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| WO 2003072046 | A2 | 20030904 | WO 2003-US5525 | | 20030224 |
| WO 2003072046 | A3 | 20050310 | | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | | |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| FAN 2005:316314 | | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |

| | | | | | |
|---------------|---------------|--|----------|-----------------|-------------|
| PI | WO 2005032474 | A2 | 20050414 | WO 2004-US32131 | 20040930 |
| | WO 2005032474 | A3 | 20060921 | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| | RW: | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| | | | | US 2003-507012P | P 20030930 |
| | | | | US 2004-567800P | P 20040505 |
| | | | | US 2004-567802P | P 20040505 |
| | | | | US 2004-568011P | P 20040505 |
| AU 2004277400 | | A1 | 20050414 | AU 2004-277400 | 20040930 |
| | | | | US 2003-507012P | P 20030930 |
| | | | | US 2004-567800P | P 20040505 |
| | | | | US 2004-567802P | P 20040505 |
| | | | | US 2004-568011P | P 20040505 |
| CA 2540678 | | AA | 20050414 | WO 2004-US32131 | W 20040930 |
| | | | | CA 2004-2540678 | 20040930 |
| | | | | US 2003-507012P | P 20030930 |
| | | | | US 2004-567800P | P 20040505 |
| | | | | US 2004-567802P | P 20040505 |
| | | | | US 2004-568011P | P 20040505 |
| | | | | WO 2004-US32131 | W 20040930 |
| EP 1675555 | | A2 | 20060705 | EP 2004-789333 | 20040930 |
| | R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR | | | |
| | | | | US 2003-507012P | P 20030930 |
| | | | | US 2004-567800P | P 20040505 |
| | | | | US 2004-567802P | P 20040505 |
| | | | | US 2004-568011P | P 20040505 |
| US 2006014697 | | A1 | 20060119 | WO 2004-US32131 | W 20040930 |
| | | | | US 2005-89056 | 20050325 |
| | | | | US 2001-933708 | A2 20010822 |
| | | | | US 2002-358368P | P 20020222 |
| | | | | US 2002-358381P | P 20020222 |
| | | | | US 2002-362082P | P 20020307 |
| | | | | US 2002-366258P | P 20020322 |
| | | | | US 2002-156527 | A2 20020529 |
| | | | | WO 2003-US5525 | A2 20030224 |
| | | | | US 2003-507012P | P 20030930 |
| | | | | US 2004-567800P | P 20040505 |
| | | | | US 2004-567802P | P 20040505 |
| | | | | US 2004-568011P | P 20040505 |
| | | | | US 2004-923088 | A2 20040823 |
| | | | | US 2004-923257 | A2 20040823 |
| | | | | US 2004-953110 | A2 20040930 |
| | | | | US 2004-953111 | A2 20040930 |
| | | | | US 2004-953116 | A2 20040930 |
| | | | | US 2004-953119 | A2 20040930 |
| | | | | US 2004-955006 | A2 20040930 |
| NO 2006001925 | | A | 20060629 | WO 2004-US32131 | A2 20040930 |
| | | | | NO 2006-1925 | 20060428 |
| | | | | US 2003-507012P | P 20030930 |
| | | | | US 2004-567800P | P 20040505 |

| | | | | | | |
|-----|---------------|--|----------|-----------------|----|----------|
| | | | | US 2004-567802P | P | 20040505 |
| | | | | US 2004-568011P | P | 20040505 |
| | | | | WO 2004-US32131 | W | 20040930 |
| FAN | 2005:325685 | | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
| PI | US 2005080012 | A1 | 20050414 | US 2004-923257 | | 20040823 |
| | | | | US 2002-358368P | P | 20020222 |
| | | | | US 2002-362082P | P | 20020307 |
| | | | | WO 2003-US5525 | A2 | 20030224 |
| | | | | WO 2003-US5525 | | 20030224 |
| | WO 2003072046 | A2 | 20030904 | | | |
| | WO 2003072046 | A3 | 20050310 | | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | US 2002-358368P | P | 20020222 |
| | | | | US 2002-362082P | P | 20020307 |
| | | | | US 2005-89056 | | 20050325 |
| | | | | US 2001-933708 | A2 | 20010822 |
| | | | | US 2002-358368P | P | 20020222 |
| | | | | US 2002-358381P | P | 20020222 |
| | | | | US 2002-362082P | P | 20020307 |
| | | | | US 2002-366258P | P | 20020322 |
| | | | | US 2002-156527 | A2 | 20020529 |
| | | | | WO 2003-US5525 | A2 | 20030224 |
| | | | | US 2003-507012P | P | 20030930 |
| | | | | US 2004-567800P | P | 20040505 |
| | | | | US 2004-567802P | P | 20040505 |
| | | | | US 2004-568011P | P | 20040505 |
| | | | | US 2004-923088 | A2 | 20040823 |
| | | | | US 2004-923257 | A2 | 20040823 |
| | | | | US 2004-953110 | A2 | 20040930 |
| | | | | US 2004-953111 | A2 | 20040930 |
| | | | | US 2004-953116 | A2 | 20040930 |
| | | | | US 2004-953119 | A2 | 20040930 |
| | | | | US 2004-955006 | A2 | 20040930 |
| | | | | WO 2004-US32131 | A2 | 20040930 |
| FAN | 2005:735301 | | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
| PI | US 2005176645 | A1 | 20050811 | US 2004-953116 | | 20040930 |
| | | | | US 2002-358368P | P | 20020222 |
| | | | | US 2002-362082P | P | 20020307 |
| | | | | WO 2003-US5525 | A2 | 20030224 |
| | | | | US 2003-507012P | P | 20030930 |
| | | | | US 2004-567800P | P | 20040505 |
| | | | | US 2004-568011P | P | 20040505 |
| | | | | US 2004-927257 | A2 | 20040827 |
| | | | | WO 2003-US5525 | | 20030224 |
| | WO 2003072046 | A2 | 20030904 | | | |
| | WO 2003072046 | A3 | 20050310 | | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, | | | | |

PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,
 UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF,
 BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

| | | | | | |
|---------------|----|----------|-----------------|----|----------|
| US 2006014697 | A1 | 20060119 | US 2002-358368P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | US 2005-89056 | | 20050325 |
| | | | US 2001-933708 | A2 | 20010822 |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-156527 | A2 | 20020529 |
| | | | WO 2003-US5525 | A2 | 20030224 |
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| | | | US 2004-567802P | P | 20040505 |
| | | | US 2004-568011P | P | 20040505 |
| | | | US 2004-923088 | A2 | 20040823 |
| | | | US 2004-923257 | A2 | 20040823 |
| | | | US 2004-953110 | A2 | 20040930 |
| | | | US 2004-953111 | A2 | 20040930 |
| | | | US 2004-953116 | A2 | 20040930 |
| | | | US 2004-953119 | A2 | 20040930 |
| | | | US 2004-955006 | A2 | 20040930 |
| | | | WO 2004-US32131 | A2 | 20040930 |

FAN 2006:57009
 PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

| | | | | | | |
|---------------|---------------|----|----------|-----------------|----|----------|
| PI | US 2006014697 | A1 | 20060119 | US 2005-89056 | | 20050325 |
| | | | | US 2001-933708 | A2 | 20010822 |
| | | | | US 2002-358368P | P | 20020222 |
| | | | | US 2002-358381P | P | 20020222 |
| | | | | US 2002-362082P | P | 20020307 |
| | | | | US 2002-366258P | P | 20020322 |
| | | | | US 2002-156527 | A2 | 20020529 |
| | | | | WO 2003-US5525 | A2 | 20030224 |
| | | | | US 2003-507012P | P | 20030930 |
| | | | | US 2004-567800P | P | 20040505 |
| | | | | US 2004-567802P | P | 20040505 |
| | | | | US 2004-568011P | P | 20040505 |
| | | | | US 2004-923088 | A2 | 20040823 |
| | | | | US 2004-923257 | A2 | 20040823 |
| | | | | US 2004-953110 | A2 | 20040930 |
| | | | | US 2004-953111 | A2 | 20040930 |
| | | | | US 2004-953116 | A2 | 20040930 |
| | | | | US 2004-953119 | A2 | 20040930 |
| | | | | US 2004-955006 | A2 | 20040930 |
| | | | | WO 2004-US32131 | A2 | 20040930 |
| US 2002099013 | | A1 | 20020725 | US 2001-933708 | | 20010822 |
| | | | | US 2000-247556P | P | 20001114 |
| | | | | US 2000-247558P | P | 20001114 |
| | | | | US 2000-247559P | P | 20001114 |
| | | | | US 2000-247560P | P | 20001114 |
| | | | | US 2000-247561P | P | 20001114 |
| | | | | US 2000-247594P | P | 20001114 |
| | | | | US 2000-247595P | P | 20001114 |
| | | | | US 2000-247606P | P | 20001114 |
| | | | | US 2000-247607P | P | 20001114 |

| | | | | | |
|---------------|----|----------|-----------------|----|----------|
| | | | US 2000-247608P | P | 20001114 |
| | | | US 2000-247609P | P | 20001114 |
| | | | US 2000-247610P | P | 20001114 |
| | | | US 2000-247611P | P | 20001114 |
| | | | US 2000-247612P | P | 20001114 |
| | | | US 2000-247620P | P | 20001114 |
| | | | US 2000-247621P | P | 20001114 |
| | | | US 2000-247634P | P | 20001114 |
| | | | US 2000-247635P | P | 20001114 |
| | | | US 2000-247698P | P | 20001114 |
| | | | US 2000-247699P | P | 20001114 |
| | | | US 2000-247700P | P | 20001114 |
| | | | US 2000-247701P | P | 20001114 |
| | | | US 2000-247702P | P | 20001114 |
| | | | US 2000-247797P | P | 20001114 |
| | | | US 2000-247798P | P | 20001114 |
| | | | US 2000-247799P | P | 20001114 |
| | | | US 2000-247800P | P | 20001114 |
| | | | US 2000-247801P | P | 20001114 |
| | | | US 2000-247802P | P | 20001114 |
| | | | US 2000-247803P | P | 20001114 |
| | | | US 2000-247804P | P | 20001114 |
| | | | US 2000-247805P | P | 20001114 |
| | | | US 2000-247807P | P | 20001114 |
| | | | US 2000-247832P | P | 20001114 |
| | | | US 2000-247833P | P | 20001114 |
| | | | US 2000-247926P | P | 20001114 |
| | | | US 2000-247927P | P | 20001114 |
| | | | US 2000-247928P | P | 20001114 |
| | | | US 2000-247929P | P | 20001114 |
| | | | US 2000-247930P | P | 20001114 |
| US 2004063628 | A1 | 20040401 | US 2002-156527 | | 20020529 |
| US 7060708 | B2 | 20060613 | | | |
| | | | US 1999-265415 | B2 | 19990310 |
| | | | US 1999-411238 | B2 | 19991004 |
| | | | WO 2000-US5693 | A | 20000306 |
| | | | US 2000-642820 | A2 | 20000822 |
| | | | US 2000-248620P | P | 20001116 |
| | | | US 2000-248656P | P | 20001116 |
| | | | US 2000-248658P | P | 20001116 |
| | | | US 2000-248659P | P | 20001116 |
| | | | US 2000-248660P | P | 20001116 |
| | | | US 2000-248662P | P | 20001116 |
| | | | US 2000-248663P | P | 20001116 |
| | | | US 2000-248685P | P | 20001116 |
| | | | US 2000-248737P | P | 20001116 |
| | | | US 2000-248738P | P | 20001116 |
| | | | US 2000-248764P | P | 20001116 |
| | | | US 2000-248767P | P | 20001116 |
| | | | US 2000-248768P | P | 20001116 |
| | | | US 2000-248769P | P | 20001116 |
| | | | US 2000-248770P | P | 20001116 |
| | | | US 2000-248771P | P | 20001116 |
| | | | US 2000-248772P | P | 20001116 |
| | | | US 2000-248774P | P | 20001116 |
| | | | US 2000-248776P | P | 20001116 |
| | | | US 2000-248777P | P | 20001116 |
| | | | US 2000-248778P | P | 20001116 |
| | | | US 2000-248779P | P | 20001116 |
| | | | US 2000-248782P | P | 20001116 |
| | | | US 2000-248787P | P | 20001116 |

| | | | | | |
|---------------|--|----------|-----------------|----|----------|
| | | | US 2000-248794P | P | 20001116 |
| | | | US 2000-248795P | P | 20001116 |
| | | | US 2000-248796P | P | 20001116 |
| | | | US 2000-248797P | P | 20001116 |
| | | | US 2001-933708 | A2 | 20010822 |
| | | | US 2001-986426 | A2 | 20011108 |
| | | | US 2001-987458 | B2 | 20011114 |
| | | | WO 2001-US43089 | B2 | 20011114 |
| | | | US 2001-988034 | B2 | 20011116 |
| | | | US 2001-988071 | B2 | 20011116 |
| | | | WO 2001-US43115 | B2 | 20011116 |
| | | | WO 2001-US43117 | B2 | 20011116 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |
| | | | WO 2003-US5525 | | 20030224 |
| WO 2003072046 | A2 | 20030904 | | | |
| WO 2003072046 | A3 | 20050310 | | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| US 2005080012 | A1 | 20050414 | US 2004-923257 | | 20040823 |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | WO 2003-US5525 | A2 | 20030224 |
| WO 2005032474 | A2 | 20050414 | WO 2004-US32131 | | 20040930 |
| WO 2005032474 | A3 | 20060921 | | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| | | | US 2004-567802P | P | 20040505 |
| | | | US 2004-568011P | P | 20040505 |
| US 2005176645 | A1 | 20050811 | US 2004-953116 | | 20040930 |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | WO 2003-US5525 | A2 | 20030224 |
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| | | | US 2004-568011P | P | 20040505 |
| | | | US 2004-927257 | A2 | 20040827 |
| US 2005176646 | A1 | 20050811 | US 2004-953119 | | 20040930 |
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| | | | US 2004-567802P | P | 20040505 |

| | | | | | |
|---------------|----|----------|-----------------|---|----------|
| US 2005176644 | A1 | 20050811 | US 2004-568011P | P | 20040505 |
| | | | US 2004-955006 | | 20040930 |
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| US 2005266070 | A1 | 20051201 | US 2004-567802P | P | 20040505 |
| | | | US 2004-953110 | | 20040930 |
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| | | | US 2004-568011P | P | 20040505 |

AB Claimed are compns. comprising a polypeptide and an active agent covalently attached to the polypeptide and a method for delivery of an active agent to a patient by administering the composition to the patient. The peptide is a homopolymer of a naturally occurring amino acid or a heteropolymer of two or more naturally occurring amino acids. In an example, (Glu)_n-cephalexin was prepared from Glu(OBut)NCA and cephalexin hydrochloride.

IT 124937-52-6, Tolterodine tartrate
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (compns. comprising a polypeptide and an active agent)

RN 124937-52-6 CAPLUS

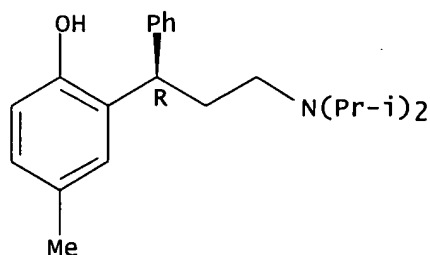
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

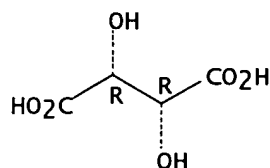


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



L11 ANSWER 70 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2002:332011 CAPLUS

DN 136:355482
 TI Compositions comprising a polypeptide and an active agent
 IN Piccariello, Thomas; Olon, Lawrence P.; Kirk, Randall J.
 PA New River Pharmaceuticals, Inc., USA
 SO PCT Int. Appl., 98 pp.
 CODEN: PIXXD2

DT Patent
 LA English
 FAN.CNT 20

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|------------|
| PI | WO 2002034237 | A1 | 20020502 | WO 2001-US26142 | 20010822 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | US 2000-642820 | A 20000822 |
| | | | | US 2000-247613P | P 20001114 |
| | | | | US 2000-247614P | P 20001114 |
| | | | | US 2000-247615P | P 20001114 |
| | | | | US 2000-247616P | P 20001114 |
| | | | | US 2000-247617P | P 20001114 |
| | | | | US 2000-247622P | P 20001114 |
| | | | | US 2000-247630P | P 20001114 |
| | | | | US 2000-247631P | P 20001114 |
| | | | | US 2000-247632P | P 20001114 |
| | | | | US 2000-247633P | P 20001114 |
| | US 6716452 | B1 | 20040406 | US 2000-642820 | 20000822 |
| | CA 2420590 | AA | 20020502 | CA 2001-2420590 | 20010822 |
| | | | | US 2000-642820 | A 20000822 |
| | | | | WO 2001-US26142 | W 20010822 |
| | AU 2001086599 | A5 | 20020506 | AU 2001-86599 | 20010822 |
| | | | | US 2000-642820 | A 20000822 |
| | | | | WO 2001-US26142 | W 20010822 |
| | EP 1311242 | A1 | 20030521 | EP 2001-966056 | 20010822 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| | | | | US 2000-642820 | A 20000822 |
| | | | | WO 2001-US26142 | W 20010822 |
| | JP 2004523480 | T2 | 20040805 | JP 2002-537291 | 20010822 |
| | | | | US 2000-642820 | A 20000822 |
| | | | | US 2000-247556P | P 20001114 |
| | | | | US 2000-247558P | P 20001114 |
| | | | | US 2000-247559P | P 20001114 |
| | | | | US 2000-247560P | P 20001114 |
| | | | | US 2000-247561P | P 20001114 |
| | | | | US 2000-247594P | P 20001114 |
| | | | | US 2000-247595P | P 20001114 |
| | | | | US 2000-247606P | P 20001114 |
| | | | | US 2000-247607P | P 20001114 |
| | | | | US 2000-247608P | P 20001114 |
| | | | | US 2000-247609P | P 20001114 |
| | | | | US 2000-247610P | P 20001114 |
| | | | | US 2000-247611P | P 20001114 |
| | | | | US 2000-247612P | P 20001114 |
| | | | | US 2000-247613P | P 20001114 |

| | | | | | |
|----------------------------|---|----------|-----------------|-----------------|-------------|
| | | | US 2000-247614P | P | 20001114 |
| | | | US 2000-247615P | P | 20001114 |
| | | | US 2000-247616P | P | 20001114 |
| | | | US 2000-247617P | P | 20001114 |
| | | | US 2000-247620P | P | 20001114 |
| | | | US 2000-247621P | P | 20001114 |
| | | | US 2000-247622P | P | 20001114 |
| | | | US 2000-247630P | P | 20001114 |
| | | | US 2000-247631P | P | 20001114 |
| | | | US 2000-247632P | P | 20001114 |
| | | | US 2000-247633P | P | 20001114 |
| | | | US 2000-247634P | P | 20001114 |
| | | | US 2000-247635P | P | 20001114 |
| | | | US 2000-247698P | P | 20001114 |
| | | | US 2000-247699P | P | 20001114 |
| | | | US 2000-247701P | P | 20001114 |
| | | | US 2000-247702P | P | 20001114 |
| | | | US 2000-247797P | P | 20001114 |
| | | | US 2000-247798P | P | 20001114 |
| | | | US 2000-247799P | P | 20001114 |
| | | | US 2000-247800P | P | 20001114 |
| | | | US 2000-247801P | P | 20001114 |
| | | | US 2000-247802P | P | 20001114 |
| | | | US 2000-247803P | P | 20001114 |
| | | | US 2000-247804P | P | 20001114 |
| | | | WO 2001-US26142 | W | 20010822 |
| | | | US 2003-727565 | | 20031205 |
| | | | US 2000-642820 | A3 | 20000822 |
| US 2004127397 | A1 | 20040701 | | | |
| PATENT FAMILY INFORMATION: | | | | | |
| FAN 2000:628201 | | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| | ----- | --- | ----- | ----- | ----- |
| PI | WO 2000052078 | A1 | 20000908 | WO 2000-US5693 | 20000306 |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | CA 2367042 | AA | 20000908 | US 1999-123146P | P 19990305 |
| | | | | CA 2000-2367042 | 20000306 |
| | | | | US 1999-123146P | P 19990305 |
| | | | | WO 2000-US5693 | W 20000306 |
| | EP 1257592 | A1 | 20021120 | EP 2000-916076 | 20000306 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | | | |
| | | | | US 1999-123146P | P 19990305 |
| | | | | WO 2000-US5693 | W 20000306 |
| | AU 771188 | B2 | 20040318 | AU 2000-37239 | 20000306 |
| | | | | US 1999-123146P | P 19990305 |
| | | | | WO 2000-US5693 | W 20000306 |
| | US 2002128177 | A1 | 20020912 | US 2001-986426 | 20011108 |
| | US 7018654 | B2 | 20060328 | | |
| | | | | US 1999-123146P | P 19990305 |
| | | | | US 1999-265415 | B2 19990310 |
| | | | | US 1999-411238 | B2 19991004 |
| | | | | WO 2000-US5693 | W 20000306 |
| | | | | US 2001-959396 | B2 20011024 |
| | US 2004063628 | A1 | 20040401 | US 2002-156527 | 20020529 |

US 7060708

B2 20060613

| | |
|-----------------|-------------|
| US 1999-265415 | B2 19990310 |
| US 1999-411238 | B2 19991004 |
| WO 2000-US5693 | A 20000306 |
| US 2000-642820 | A2 20000822 |
| US 2000-248620P | P 20001116 |
| US 2000-248656P | P 20001116 |
| US 2000-248658P | P 20001116 |
| US 2000-248659P | P 20001116 |
| US 2000-248660P | P 20001116 |
| US 2000-248662P | P 20001116 |
| US 2000-248663P | P 20001116 |
| US 2000-248685P | P 20001116 |
| US 2000-248737P | P 20001116 |
| US 2000-248738P | P 20001116 |
| US 2000-248764P | P 20001116 |
| US 2000-248767P | P 20001116 |
| US 2000-248768P | P 20001116 |
| US 2000-248769P | P 20001116 |
| US 2000-248770P | P 20001116 |
| US 2000-248771P | P 20001116 |
| US 2000-248772P | P 20001116 |
| US 2000-248774P | P 20001116 |
| US 2000-248776P | P 20001116 |
| US 2000-248777P | P 20001116 |
| US 2000-248778P | P 20001116 |
| US 2000-248779P | P 20001116 |
| US 2000-248782P | P 20001116 |
| US 2000-248787P | P 20001116 |
| US 2000-248794P | P 20001116 |
| US 2000-248795P | P 20001116 |
| US 2000-248796P | P 20001116 |
| US 2000-248797P | P 20001116 |
| US 2001-933708 | A2 20010822 |
| US 2001-986426 | A2 20011108 |
| US 2001-987458 | B2 20011114 |
| WO 2001-US43089 | B2 20011114 |
| US 2001-988034 | B2 20011116 |
| US 2001-988071 | B2 20011116 |
| WO 2001-US43115 | B2 20011116 |
| WO 2001-US43117 | B2 20011116 |
| US 2002-358381P | P 20020222 |
| US 2002-366258P | P 20020322 |
| AU 2004-202699 | 20040618 |
| US 1999-123146P | P 19990305 |
| WO 2000-US5693 | W 20000306 |

AU 2004202699

A1 20040729

FAN 2000:645894
PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

| | | | | | |
|----|---|----|----------|----------------|------------|
| PI | WO 2000053233 | A1 | 20000914 | WO 2000-US3717 | 20000310 |
| | W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | US 1999-265415 | A 19990310 |
| | | | | US 1999-411238 | A 19991004 |
| | JP 2002540073 | T2 | 20021126 | JP 2000-603722 | 20000310 |

| | | | | | | |
|-----|---|------|----------|-----------------|----|----------|
| | | | | US 1999-265415 | A | 19990310 |
| | | | | US 1999-411238 | A | 19991004 |
| | | | | WO 2000-US3717 | W | 20000310 |
| FAN | 2002:504641 | | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
| PI | WO 2002051432 | A1 | 20020704 | WO 2001-US43115 | | 20011116 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | | |
| | US 2004063628 | A1 | 20040401 | US 2002-156527 | | 20020529 |
| | US 7060708 | B2 | 20060613 | | | |
| | | | | US 1999-265415 | B2 | 19990310 |
| | | | | US 1999-411238 | B2 | 19991004 |
| | | | | WO 2000-US5693 | A | 20000306 |
| | | | | US 2000-642820 | A2 | 20000822 |
| | | | | US 2000-248620P | P | 20001116 |
| | | | | US 2000-248656P | P | 20001116 |
| | | | | US 2000-248658P | P | 20001116 |
| | | | | US 2000-248659P | P | 20001116 |
| | | | | US 2000-248660P | P | 20001116 |
| | | | | US 2000-248662P | P | 20001116 |
| | | | | US 2000-248663P | P | 20001116 |
| | | | | US 2000-248685P | P | 20001116 |
| | | | | US 2000-248737P | P | 20001116 |
| | | | | US 2000-248738P | P | 20001116 |
| | | | | US 2000-248764P | P | 20001116 |
| | | | | US 2000-248767P | P | 20001116 |
| | | | | US 2000-248768P | P | 20001116 |
| | | | | US 2000-248769P | P | 20001116 |
| | | | | US 2000-248770P | P | 20001116 |
| | | | | US 2000-248771P | P | 20001116 |
| | | | | US 2000-248772P | P | 20001116 |
| | | | | US 2000-248774P | P | 20001116 |
| | | | | US 2000-248776P | P | 20001116 |
| | | | | US 2000-248777P | P | 20001116 |
| | | | | US 2000-248778P | P | 20001116 |
| | | | | US 2000-248779P | P | 20001116 |
| | | | | US 2000-248782P | P | 20001116 |
| | | | | US 2000-248787P | P | 20001116 |
| | | | | US 2000-248794P | P | 20001116 |
| | | | | US 2000-248795P | P | 20001116 |
| | | | | US 2000-248796P | P | 20001116 |
| | | | | US 2000-248797P | P | 20001116 |
| | | | | US 2001-933708 | A2 | 20010822 |
| | | | | US 2001-986426 | A2 | 20011108 |
| | | | | US 2001-987458 | B2 | 20011114 |
| | | | | WO 2001-US43089 | B2 | 20011114 |
| | | | | US 2001-988034 | B2 | 20011116 |
| | | | | US 2001-988071 | B2 | 20011116 |
| | | | | WO 2001-US43115 | B2 | 20011116 |
| | | | | WO 2001-US43117 | B2 | 20011116 |
| | | | | US 2002-358381P | P | 20020222 |
| | | | | US 2002-366258P | P | 20020322 |
| FAN | 2002:556104 | | | | | |

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------|----------|-----------------|-------------|
| PI | US 2002099013 | A1 | 20020725 | US 2001-933708 | 20010822 |
| | | | | US 2000-247556P | P 20001114 |
| | | | | US 2000-247558P | P 20001114 |
| | | | | US 2000-247559P | P 20001114 |
| | | | | US 2000-247560P | P 20001114 |
| | | | | US 2000-247561P | P 20001114 |
| | | | | US 2000-247594P | P 20001114 |
| | | | | US 2000-247595P | P 20001114 |
| | | | | US 2000-247606P | P 20001114 |
| | | | | US 2000-247607P | P 20001114 |
| | | | | US 2000-247608P | P 20001114 |
| | | | | US 2000-247609P | P 20001114 |
| | | | | US 2000-247610P | P 20001114 |
| | | | | US 2000-247611P | P 20001114 |
| | | | | US 2000-247612P | P 20001114 |
| | | | | US 2000-247620P | P 20001114 |
| | | | | US 2000-247621P | P 20001114 |
| | | | | US 2000-247634P | P 20001114 |
| | | | | US 2000-247635P | P 20001114 |
| | | | | US 2000-247698P | P 20001114 |
| | | | | US 2000-247699P | P 20001114 |
| | | | | US 2000-247700P | P 20001114 |
| | | | | US 2000-247701P | P 20001114 |
| | | | | US 2000-247702P | P 20001114 |
| | | | | US 2000-247797P | P 20001114 |
| | | | | US 2000-247798P | P 20001114 |
| | | | | US 2000-247799P | P 20001114 |
| | | | | US 2000-247800P | P 20001114 |
| | | | | US 2000-247801P | P 20001114 |
| | | | | US 2000-247802P | P 20001114 |
| | | | | US 2000-247803P | P 20001114 |
| | | | | US 2000-247804P | P 20001114 |
| | | | | US 2000-247805P | P 20001114 |
| | | | | US 2000-247807P | P 20001114 |
| | | | | US 2000-247832P | P 20001114 |
| | | | | US 2000-247833P | P 20001114 |
| | | | | US 2000-247926P | P 20001114 |
| | | | | US 2000-247927P | P 20001114 |
| | | | | US 2000-247928P | P 20001114 |
| | | | | US 2000-247929P | P 20001114 |
| | | | | US 2000-247930P | P 20001114 |
| | US 2004087483 | A1 | 20040506 | US 2002-136433 | 20020502 |
| | | | | US 2000-642820 | A2 20000822 |
| | | | | US 2000-248607P | P 20001116 |
| | US 2004063628 | A1 | 20040401 | US 2001-933708 | A2 20010822 |
| | US 7060708 | B2 | 20060613 | US 2002-156527 | 20020529 |
| | | | | US 1999-265415 | B2 19990310 |
| | | | | US 1999-411238 | B2 19991004 |
| | | | | WO 2000-US5693 | A 20000306 |
| | | | | US 2000-642820 | A2 20000822 |
| | | | | US 2000-248620P | P 20001116 |
| | | | | US 2000-248656P | P 20001116 |
| | | | | US 2000-248658P | P 20001116 |
| | | | | US 2000-248659P | P 20001116 |
| | | | | US 2000-248660P | P 20001116 |
| | | | | US 2000-248662P | P 20001116 |
| | | | | US 2000-248663P | P 20001116 |
| | | | | US 2000-248685P | P 20001116 |

| | | | | | | |
|---------------|---------------|----------|----------|-----------------|----|----------|
| | | | | US 2000-248737P | P | 20001116 |
| | | | | US 2000-248738P | P | 20001116 |
| | | | | US 2000-248764P | P | 20001116 |
| | | | | US 2000-248767P | P | 20001116 |
| | | | | US 2000-248768P | P | 20001116 |
| | | | | US 2000-248769P | P | 20001116 |
| | | | | US 2000-248770P | P | 20001116 |
| | | | | US 2000-248771P | P | 20001116 |
| | | | | US 2000-248772P | P | 20001116 |
| | | | | US 2000-248774P | P | 20001116 |
| | | | | US 2000-248776P | P | 20001116 |
| | | | | US 2000-248777P | P | 20001116 |
| | | | | US 2000-248778P | P | 20001116 |
| | | | | US 2000-248779P | P | 20001116 |
| | | | | US 2000-248782P | P | 20001116 |
| | | | | US 2000-248787P | P | 20001116 |
| | | | | US 2000-248794P | P | 20001116 |
| | | | | US 2000-248795P | P | 20001116 |
| | | | | US 2000-248796P | P | 20001116 |
| | | | | US 2000-248797P | P | 20001116 |
| | | | | US 2001-933708 | A2 | 20010822 |
| | | | | US 2001-986426 | A2 | 20011108 |
| | | | | US 2001-987458 | B2 | 20011114 |
| | | | | WO 2001-US43089 | B2 | 20011114 |
| | | | | US 2001-988034 | B2 | 20011116 |
| | | | | US 2001-988071 | B2 | 20011116 |
| | | | | WO 2001-US43115 | B2 | 20011116 |
| | | | | WO 2001-US43117 | B2 | 20011116 |
| | | | | US 2002-358381P | P | 20020222 |
| | | | | US 2002-366258P | P | 20020322 |
| US 2006014697 | A1 | 20060119 | | US 2005-89056 | | 20050325 |
| | | | | US 2001-933708 | A2 | 20010822 |
| | | | | US 2002-358368P | P | 20020222 |
| | | | | US 2002-358381P | P | 20020222 |
| | | | | US 2002-362082P | P | 20020307 |
| | | | | US 2002-366258P | P | 20020322 |
| | | | | US 2002-156527 | A2 | 20020529 |
| | | | | WO 2003-US5525 | A2 | 20030224 |
| | | | | US 2003-507012P | P | 20030930 |
| | | | | US 2004-567800P | P | 20040505 |
| | | | | US 2004-567802P | P | 20040505 |
| | | | | US 2004-568011P | P | 20040505 |
| | | | | US 2004-923088 | A2 | 20040823 |
| | | | | US 2004-923257 | A2 | 20040823 |
| | | | | US 2004-953110 | A2 | 20040930 |
| | | | | US 2004-953111 | A2 | 20040930 |
| | | | | US 2004-953116 | A2 | 20040930 |
| | | | | US 2004-953119 | A2 | 20040930 |
| | | | | US 2004-955006 | A2 | 20040930 |
| | | | | WO 2004-US32131 | A2 | 20040930 |
| FAN | 2002:696639 | | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
| | ----- | ---- | ----- | ----- | | ----- |
| PI | US 2002128177 | A1 | 20020912 | US 2001-986426 | | 20011108 |
| | US 7018654 | B2 | 20060328 | | | |
| | | | | US 1999-123146P | P | 19990305 |
| | | | | US 1999-265415 | B2 | 19990310 |
| | | | | US 1999-411238 | B2 | 19991004 |
| | | | | WO 2000-US5693 | W | 20000306 |
| | | | | US 2001-959396 | B2 | 20011024 |
| WO 2000052078 | A1 | 20000908 | | WO 2000-US5693 | | 20000306 |

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2004063628 A1 20040401 US 1999-123146P P 19990305
 US 7060708 B2 20060613 US 2002-156527 20020529

US 1999-265415 B2 19990310
 US 1999-411238 B2 19991004
 WO 2000-US5693 A 20000306
 US 2000-642820 A2 20000822
 US 2000-248620P P 20001116
 US 2000-248656P P 20001116
 US 2000-248658P P 20001116
 US 2000-248659P P 20001116
 US 2000-248660P P 20001116
 US 2000-248662P P 20001116
 US 2000-248663P P 20001116
 US 2000-248685P P 20001116
 US 2000-248737P P 20001116
 US 2000-248738P P 20001116
 US 2000-248764P P 20001116
 US 2000-248767P P 20001116
 US 2000-248768P P 20001116
 US 2000-248769P P 20001116
 US 2000-248770P P 20001116
 US 2000-248771P P 20001116
 US 2000-248772P P 20001116
 US 2000-248774P P 20001116
 US 2000-248776P P 20001116
 US 2000-248777P P 20001116
 US 2000-248778P P 20001116
 US 2000-248779P P 20001116
 US 2000-248782P P 20001116
 US 2000-248787P P 20001116
 US 2000-248794P P 20001116
 US 2000-248795P P 20001116
 US 2000-248796P P 20001116
 US 2000-248797P P 20001116
 US 2001-933708 A2 20010822
 US 2001-986426 A2 20011108
 US 2001-987458 B2 20011114
 WO 2001-US43089 B2 20011114
 US 2001-988034 B2 20011116
 US 2001-988071 B2 20011116
 WO 2001-US43115 B2 20011116
 WO 2001-US43117 B2 20011116
 US 2002-358381P P 20020222
 US 2002-366258P P 20020322

FAN 2003:202410
 PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

PI WO 2003020200 A2 20030313
 WO 2003020200 A3 20030912

WO 2001-US43117 20011116

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,

| | | |
|------------|---|------------|
| | LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, | |
| | PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, | |
| | UG, US, UZ, VN, YU, ZA, ZW | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, | |
| | KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, | |
| | GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, | |
| | GN, GQ, GW, ML, MR, NE, SN, TD, TG | |
| | US 2000-248600P | P 20001116 |
| | US 2000-248601P | P 20001116 |
| | US 2000-248603P | P 20001116 |
| | US 2000-248604P | P 20001116 |
| | US 2000-248606P | P 20001116 |
| | US 2000-248607P | P 20001116 |
| | US 2000-248608P | P 20001116 |
| | US 2000-248609P | P 20001116 |
| | US 2000-248611P | P 20001116 |
| | US 2000-248689P | P 20001116 |
| | US 2000-248691P | P 20001116 |
| | US 2000-248692P | P 20001116 |
| | US 2000-248693P | P 20001116 |
| | US 2000-248694P | P 20001116 |
| | US 2000-248695P | P 20001116 |
| | US 2000-248696P | P 20001116 |
| | US 2000-248697P | P 20001116 |
| | US 2000-248698P | P 20001116 |
| | US 2000-248701P | P 20001116 |
| | US 2000-248702P | P 20001116 |
| | US 2000-248703P | P 20001116 |
| | US 2000-248704P | P 20001116 |
| | US 2000-248705P | P 20001116 |
| | US 2000-248706P | P 20001116 |
| | US 2000-248707P | P 20001116 |
| | US 2000-248708P | P 20001116 |
| | US 2000-248709P | P 20001116 |
| | US 2000-248710P | P 20001116 |
| | US 2000-248711P | P 20001116 |
| | US 2000-248712P | P 20001116 |
| CA 2429345 | AA 20030313 CA 2001-2429345 | 20011116 |
| | US 2000-248600P | P 20001116 |
| | US 2000-248601P | P 20001116 |
| | US 2000-248603P | P 20001116 |
| | US 2000-248604P | P 20001116 |
| | US 2000-248606P | P 20001116 |
| | US 2000-248607P | P 20001116 |
| | US 2000-248608P | P 20001116 |
| | US 2000-248609P | P 20001116 |
| | US 2000-248611P | P 20001116 |
| | US 2000-248686P | P 20001116 |
| | US 2000-248688P | P 20001116 |
| | US 2000-248689P | P 20001116 |
| | US 2000-248691P | P 20001116 |
| | US 2000-248692P | P 20001116 |
| | US 2000-248693P | P 20001116 |
| | US 2000-248694P | P 20001116 |
| | US 2000-248695P | P 20001116 |
| | US 2000-248696P | P 20001116 |
| | US 2000-248697P | P 20001116 |
| | US 2000-248698P | P 20001116 |
| | US 2000-248701P | P 20001116 |
| | US 2000-248702P | P 20001116 |
| | US 2000-248703P | P 20001116 |

| | | | |
|---|-----------------|----------------|----------|
| | US 2000-248704P | P | 20001116 |
| | US 2000-248705P | P | 20001116 |
| | US 2000-248706P | P | 20001116 |
| | US 2000-248707P | P | 20001116 |
| | US 2000-248708P | P | 20001116 |
| | US 2000-248709P | P | 20001116 |
| | US 2000-248710P | P | 20001116 |
| | US 2000-248711P | P | 20001116 |
| | US 2000-248712P | P | 20001116 |
| | US 2000-248714P | P | 20001116 |
| | US 2000-248715P | P | 20001116 |
| | US 2000-248716P | P | 20001116 |
| | US 2000-248717P | P | 20001116 |
| | US 2000-248718P | P | 20001116 |
| | US 2000-248719P | P | 20001116 |
| | US 2000-248720P | P | 20001116 |
| | US 2000-248748P | P | 20001116 |
| | WO 2001-US43117 | W | 20011116 |
| EP 1357928 | A2 20031105 | EP 2001-273387 | 20011116 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | |
| | US 2000-248705P | P | 20001116 |
| | US 2001-248664P | P | 20011116 |
| | US 2001-248665P | P | 20011116 |
| | US 2001-248666P | P | 20011116 |
| | US 2001-248667P | P | 20011116 |
| | US 2001-248668P | P | 20011116 |
| | US 2001-248669P | P | 20011116 |
| | US 2001-248671P | P | 20011116 |
| | US 2001-248672P | P | 20011116 |
| | US 2001-248673P | P | 20011116 |
| | US 2001-248674P | P | 20011116 |
| | US 2001-248675P | P | 20011116 |
| | US 2001-248676P | P | 20011116 |
| | US 2001-248677P | P | 20011116 |
| | US 2001-248678P | P | 20011116 |
| | US 2001-248679P | P | 20011116 |
| | US 2001-248680P | P | 20011116 |
| | US 2001-248681P | P | 20011116 |
| | US 2001-248682P | P | 20011116 |
| | US 2001-248683P | P | 20011116 |
| | US 2001-248684P | P | 20011116 |
| | US 2001-248765P | P | 20011116 |
| | US 2001-248766P | P | 20011116 |
| | US 2001-248767P | P | 20011116 |
| | US 2001-248773P | P | 20011116 |
| | US 2001-248774P | P | 20011116 |
| | US 2001-248775P | P | 20011116 |
| | US 2001-248778P | P | 20011116 |
| | US 2001-248780P | P | 20011116 |
| | US 2001-248781P | P | 20011116 |
| | US 2001-248783P | P | 20011116 |
| | US 2001-248784P | P | 20011116 |
| | US 2001-248785P | P | 20011116 |
| | US 2001-248786P | P | 20011116 |
| | US 2001-248787P | P | 20011116 |
| | US 2001-248790P | P | 20011116 |
| | US 2001-248791P | P | 20011116 |
| | US 2001-248792P | P | 20011116 |
| | US 2001-248793P | P | 20011116 |
| | US 2001-248833P | P | 20011116 |

| | | | | | |
|---------------|----|----------|-----------------|----|----------|
| | | | US 2001-248848P | P | 20011116 |
| | | | US 2001-248849P | P | 20011116 |
| | | | WO 2001-US43117 | W | 20011116 |
| JP 2006516947 | T2 | 20060713 | JP 2003-524514 | | 20011116 |
| | | | US 2000-248600P | P | 20001116 |
| | | | US 2000-248601P | P | 20001116 |
| | | | US 2000-248603P | P | 20001116 |
| | | | US 2000-248604P | P | 20001116 |
| | | | US 2000-248606P | P | 20001116 |
| | | | US 2000-248607P | P | 20001116 |
| | | | US 2000-248608P | P | 20001116 |
| | | | US 2000-248609P | P | 20001116 |
| | | | US 2000-248611P | P | 20001116 |
| | | | US 2000-248695P | P | 20001116 |
| | | | US 2000-248696P | P | 20001116 |
| | | | US 2000-248697P | P | 20001116 |
| | | | US 2000-248698P | P | 20001116 |
| | | | US 2000-248701P | P | 20001116 |
| | | | US 2000-248702P | P | 20001116 |
| | | | US 2000-248703P | P | 20001116 |
| | | | US 2000-248704P | P | 20001116 |
| | | | US 2000-248705P | P | 20001116 |
| | | | US 2000-248706P | P | 20001116 |
| | | | US 2000-248707P | P | 20001116 |
| | | | US 2000-248708P | P | 20001116 |
| | | | US 2000-248709P | P | 20001116 |
| | | | US 2000-248711P | P | 20001116 |
| | | | US 2000-248712P | P | 20001116 |
| | | | US 2001-248664P | P | 20011116 |
| | | | US 2001-248665P | P | 20011116 |
| | | | US 2001-248666P | P | 20011116 |
| | | | US 2001-248667P | P | 20011116 |
| | | | US 2001-248668P | P | 20011116 |
| | | | US 2001-248669P | P | 20011116 |
| | | | US 2001-248671P | P | 20011116 |
| | | | US 2001-248673P | P | 20011116 |
| | | | US 2001-248674P | P | 20011116 |
| | | | US 2001-248675P | P | 20011116 |
| | | | US 2001-248676P | P | 20011116 |
| | | | US 2001-248677P | P | 20011116 |
| | | | US 2001-248678P | P | 20011116 |
| | | | US 2001-248679P | P | 20011116 |
| | | | US 2001-248680P | P | 20011116 |
| | | | US 2001-248681P | P | 20011116 |
| | | | US 2001-248682P | P | 20011116 |
| | | | US 2001-248683P | P | 20011116 |
| | | | US 2001-248684P | P | 20011116 |
| | | | US 2001-248790P | P | 20011116 |
| | | | US 2001-248792P | P | 20011116 |
| | | | US 2001-248793P | P | 20011116 |
| | | | US 2001-248848P | P | 20011116 |
| | | | US 2001-248849P | P | 20011116 |
| | | | WO 2001-US43117 | W | 20011116 |
| | | | US 2002-156527 | | 20020529 |
| | | | US 1999-265415 | B2 | 19990310 |
| | | | US 1999-411238 | B2 | 19991004 |
| | | | WO 2000-US5693 | A | 20000306 |
| | | | US 2000-642820 | A2 | 20000822 |
| US 2004063628 | A1 | 20040401 | US 2000-248620P | P | 20001116 |
| US 7060708 | B2 | 20060613 | US 2000-248656P | P | 20001116 |

| | | |
|-----------------|----|----------|
| US 2000-248658P | P | 20001116 |
| US 2000-248659P | P | 20001116 |
| US 2000-248660P | P | 20001116 |
| US 2000-248662P | P | 20001116 |
| US 2000-248663P | P | 20001116 |
| US 2000-248685P | P | 20001116 |
| US 2000-248737P | P | 20001116 |
| US 2000-248738P | P | 20001116 |
| US 2000-248764P | P | 20001116 |
| US 2000-248767P | P | 20001116 |
| US 2000-248768P | P | 20001116 |
| US 2000-248769P | P | 20001116 |
| US 2000-248770P | P | 20001116 |
| US 2000-248771P | P | 20001116 |
| US 2000-248772P | P | 20001116 |
| US 2000-248774P | P | 20001116 |
| US 2000-248776P | P | 20001116 |
| US 2000-248777P | P | 20001116 |
| US 2000-248778P | P | 20001116 |
| US 2000-248779P | P | 20001116 |
| US 2000-248782P | P | 20001116 |
| US 2000-248787P | P | 20001116 |
| US 2000-248794P | P | 20001116 |
| US 2000-248795P | P | 20001116 |
| US 2000-248796P | P | 20001116 |
| US 2000-248797P | P | 20001116 |
| US 2001-933708 | A2 | 20010822 |
| US 2001-986426 | A2 | 20011108 |
| US 2001-987458 | B2 | 20011114 |
| WO 2001-US43089 | B2 | 20011114 |
| US 2001-988034 | B2 | 20011116 |
| US 2001-988071 | B2 | 20011116 |
| WO 2001-US43115 | B2 | 20011116 |
| WO 2001-US43117 | B2 | 20011116 |
| US 2002-358381P | P | 20020222 |
| US 2002-366258P | P | 20020322 |

| FAN | 2003:334829 | | | | |
|-----|---------------|--|----------|-----------------|------------|
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| PI | WO 2003034980 | A2 | 20030501 | WO 2001-US43089 | 20011114 |
| | WO 2003034980 | C1 | 20031120 | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| | CA 2428971 | AA | 20030501 | US 2000-274622P | P 20001114 |
| | | | | CA 2001-2428971 | 20011114 |
| | | | | US 2000-247622P | P 20001114 |
| | | | | WO 2001-US43089 | W 20011114 |
| | EP 1401374 | A1 | 20040331 | EP 2001-274606 | 20011114 |
| | R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | |
| | | | | US 2000-274622P | P 20001114 |
| | | | | WO 2001-US43089 | W 20011114 |
| | JP 2006516948 | T2 | 20060713 | JP 2003-537549 | 20011114 |

| | | | | | |
|---------------|----|----------|-----------------|----|----------|
| US 2004063628 | A1 | 20040401 | US 2000-274622P | P | 20001114 |
| US 7060708 | B2 | 20060613 | WO 2001-US43089 | W | 20011114 |
| | | | US 2002-156527 | | 20020529 |
| | | | US 1999-265415 | B2 | 19990310 |
| | | | US 1999-411238 | B2 | 19991004 |
| | | | WO 2000-US5693 | A | 20000306 |
| | | | US 2000-642820 | A2 | 20000822 |
| | | | US 2000-248620P | P | 20001116 |
| | | | US 2000-248656P | P | 20001116 |
| | | | US 2000-248658P | P | 20001116 |
| | | | US 2000-248659P | P | 20001116 |
| | | | US 2000-248660P | P | 20001116 |
| | | | US 2000-248662P | P | 20001116 |
| | | | US 2000-248663P | P | 20001116 |
| | | | US 2000-248685P | P | 20001116 |
| | | | US 2000-248737P | P | 20001116 |
| | | | US 2000-248738P | P | 20001116 |
| | | | US 2000-248764P | P | 20001116 |
| | | | US 2000-248767P | P | 20001116 |
| | | | US 2000-248768P | P | 20001116 |
| | | | US 2000-248769P | P | 20001116 |
| | | | US 2000-248770P | P | 20001116 |
| | | | US 2000-248771P | P | 20001116 |
| | | | US 2000-248772P | P | 20001116 |
| | | | US 2000-248774P | P | 20001116 |
| | | | US 2000-248776P | P | 20001116 |
| | | | US 2000-248777P | P | 20001116 |
| | | | US 2000-248778P | P | 20001116 |
| | | | US 2000-248779P | P | 20001116 |
| | | | US 2000-248782P | P | 20001116 |
| | | | US 2000-248787P | P | 20001116 |
| | | | US 2000-248794P | P | 20001116 |
| | | | US 2000-248795P | P | 20001116 |
| | | | US 2000-248796P | P | 20001116 |
| | | | US 2000-248797P | P | 20001116 |
| | | | US 2001-933708 | A2 | 20010822 |
| | | | US 2001-986426 | A2 | 20011108 |
| | | | US 2001-987458 | B2 | 20011114 |
| | | | WO 2001-US43089 | B2 | 20011114 |
| | | | US 2001-988034 | B2 | 20011116 |
| | | | US 2001-988071 | B2 | 20011116 |
| | | | WO 2001-US43115 | B2 | 20011116 |
| | | | WO 2001-US43117 | B2 | 20011116 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |

| FAN | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----|---------------|--|----------|-----------------|----------|
| PI | WO 2003072046 | A2 | 20030904 | WO 2003-US5525 | 20030224 |
| | WO 2003072046 | A3 | 20050310 | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |

| | | | | | |
|---|----|----------|-----------------|----|----------|
| CA 2477004 | AA | 20030904 | US 2002-358368P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | CA 2003-2477004 | | 20030224 |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | WO 2003-US5525 | W | 20030224 |
| AU 2003219863 | A1 | 20030909 | AU 2003-219863 | | 20030224 |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | WO 2003-US5525 | W | 20030224 |
| EP 1531844 | A2 | 20050525 | EP 2003-716144 | | 20030224 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | | |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | WO 2003-US5525 | W | 20030224 |
| JP 2005524648 | T2 | 20050818 | JP 2003-570793 | | 20030224 |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | WO 2003-US5525 | W | 20030224 |
| CN 1720059 | A | 20060111 | CN 2003-808716 | | 20030224 |
| | | | US 2002-358368P | P | 20020222 |
| US 2005054561 | A1 | 20050310 | US 2002-362082P | P | 20020307 |
| US 7105486 | B2 | 20060912 | US 2004-858526 | | 20040601 |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | WO 2003-US5525 | A2 | 20030224 |
| | | | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| US 2005080012 | A1 | 20050414 | US 2004-923257 | | 20040823 |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | WO 2003-US5525 | A2 | 20030224 |
| US 2005176645 | A1 | 20050811 | US 2004-953116 | | 20040930 |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | WO 2003-US5525 | A2 | 20030224 |
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| | | | US 2004-568011P | P | 20040505 |
| | | | US 2004-927257 | A2 | 20040827 |
| US 2006014697 | A1 | 20060119 | US 2005-89056 | | 20050325 |
| | | | US 2001-933708 | A2 | 20010822 |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-156527 | A2 | 20020529 |
| | | | WO 2003-US5525 | A2 | 20030224 |
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| | | | US 2004-567802P | P | 20040505 |
| | | | US 2004-568011P | P | 20040505 |
| | | | US 2004-923088 | A2 | 20040823 |
| | | | US 2004-923257 | A2 | 20040823 |
| | | | US 2004-953110 | A2 | 20040930 |
| | | | US 2004-953111 | A2 | 20040930 |
| | | | US 2004-953116 | A2 | 20040930 |
| | | | US 2004-953119 | A2 | 20040930 |
| | | | US 2004-955006 | A2 | 20040930 |

| FAN 2003:696689 | | WO 2004-US32131 | | A2 20040930 | |
|-----------------|---|-----------------|----------|-----------------|-------------|
| PATENT NO. | | KIND | DATE | APPLICATION NO. | DATE |
| ----- | | ---- | ----- | ----- | ----- |
| PI | WO 2003072047 | A2 | 20030904 | WO 2003-US5526 | 20030224 |
| | WO 2003072047 | A3 | 20040617 | | |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | US 2002-358381P | P 20020222 |
| | | | | US 2002-366258P | P 20020322 |
| | | | | US 2002-136433 | A 20020502 |
| | | | | US 2002-156527 | A 20020529 |
| US 2004087483 | A1 | 20040506 | | US 2002-136433 | 20020502 |
| | | | | US 2000-642820 | A2 20000822 |
| | | | | US 2000-248607P | P 20001116 |
| | | | | US 2001-933708 | A2 20010822 |
| US 2004063628 | A1 | 20040401 | | US 2002-156527 | 20020529 |
| US 7060708 | B2 | 20060613 | | | |
| | | | | US 1999-265415 | B2 19990310 |
| | | | | US 1999-411238 | B2 19991004 |
| | | | | WO 2000-US5693 | A 20000306 |
| | | | | US 2000-642820 | A2 20000822 |
| | | | | US 2000-248620P | P 20001116 |
| | | | | US 2000-248656P | P 20001116 |
| | | | | US 2000-248658P | P 20001116 |
| | | | | US 2000-248659P | P 20001116 |
| | | | | US 2000-248660P | P 20001116 |
| | | | | US 2000-248662P | P 20001116 |
| | | | | US 2000-248663P | P 20001116 |
| | | | | US 2000-248685P | P 20001116 |
| | | | | US 2000-248737P | P 20001116 |
| | | | | US 2000-248738P | P 20001116 |
| | | | | US 2000-248764P | P 20001116 |
| | | | | US 2000-248767P | P 20001116 |
| | | | | US 2000-248768P | P 20001116 |
| | | | | US 2000-248769P | P 20001116 |
| | | | | US 2000-248770P | P 20001116 |
| | | | | US 2000-248771P | P 20001116 |
| | | | | US 2000-248772P | P 20001116 |
| | | | | US 2000-248774P | P 20001116 |
| | | | | US 2000-248776P | P 20001116 |
| | | | | US 2000-248777P | P 20001116 |
| | | | | US 2000-248778P | P 20001116 |
| | | | | US 2000-248779P | P 20001116 |
| | | | | US 2000-248782P | P 20001116 |
| | | | | US 2000-248787P | P 20001116 |
| | | | | US 2000-248794P | P 20001116 |
| | | | | US 2000-248795P | P 20001116 |
| | | | | US 2000-248796P | P 20001116 |
| | | | | US 2000-248797P | P 20001116 |
| | | | | US 2001-933708 | A2 20010822 |
| | | | | US 2001-986426 | A2 20011108 |
| | | | | US 2001-987458 | B2 20011114 |

| | | | | | |
|---------------|---------------|--|-----------------|-----------------|----------|
| | | | WO 2001-US43089 | B2 | 20011114 |
| | | | US 2001-988034 | B2 | 20011116 |
| | | | US 2001-988071 | B2 | 20011116 |
| | | | WO 2001-US43115 | B2 | 20011116 |
| | | | WO 2001-US43117 | B2 | 20011116 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |
| AU 2003216382 | A1 | 20030909 | AU 2003-216382 | | 20030224 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-136433 | A | 20020502 |
| | | | US 2002-156527 | A | 20020529 |
| | | | WO 2003-US5526 | W | 20030224 |
| FAN | 2003:777522 | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| | ----- | ---- | ----- | ----- | ----- |
| PI | WO 2003079972 | A2 | 20031002 | WO 2003-US5524 | 20030224 |
| | WO 2003079972 | A3 | 20040318 | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-156527 | A | 20020529 |
| US 2004063628 | A1 | 20040401 | US 2002-156527 | | 20020529 |
| US 7060708 | B2 | 20060613 | | | |
| | | | US 1999-265415 | B2 | 19990310 |
| | | | US 1999-411238 | B2 | 19991004 |
| | | | WO 2000-US5693 | A | 20000306 |
| | | | US 2000-642820 | A2 | 20000822 |
| | | | US 2000-248620P | P | 20001116 |
| | | | US 2000-248656P | P | 20001116 |
| | | | US 2000-248658P | P | 20001116 |
| | | | US 2000-248659P | P | 20001116 |
| | | | US 2000-248660P | P | 20001116 |
| | | | US 2000-248662P | P | 20001116 |
| | | | US 2000-248663P | P | 20001116 |
| | | | US 2000-248685P | P | 20001116 |
| | | | US 2000-248737P | P | 20001116 |
| | | | US 2000-248738P | P | 20001116 |
| | | | US 2000-248764P | P | 20001116 |
| | | | US 2000-248767P | P | 20001116 |
| | | | US 2000-248768P | P | 20001116 |
| | | | US 2000-248769P | P | 20001116 |
| | | | US 2000-248770P | P | 20001116 |
| | | | US 2000-248771P | P | 20001116 |
| | | | US 2000-248772P | P | 20001116 |
| | | | US 2000-248774P | P | 20001116 |
| | | | US 2000-248776P | P | 20001116 |
| | | | US 2000-248777P | P | 20001116 |
| | | | US 2000-248778P | P | 20001116 |
| | | | US 2000-248779P | P | 20001116 |
| | | | US 2000-248782P | P | 20001116 |
| | | | US 2000-248787P | P | 20001116 |

| | | | | | |
|---|------|----------|-----------------|----|----------|
| | | | US 2000-248794P | P | 20001116 |
| | | | US 2000-248795P | P | 20001116 |
| | | | US 2000-248796P | P | 20001116 |
| | | | US 2000-248797P | P | 20001116 |
| | | | US 2001-933708 | A2 | 20010822 |
| | | | US 2001-986426 | A2 | 20011108 |
| | | | US 2001-987458 | B2 | 20011114 |
| | | | WO 2001-US43089 | B2 | 20011114 |
| | | | US 2001-988034 | B2 | 20011116 |
| | | | US 2001-988071 | B2 | 20011116 |
| | | | WO 2001-US43115 | B2 | 20011116 |
| | | | WO 2001-US43117 | B2 | 20011116 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |
| CA 2477088 | AA | 20031002 | CA 2003-2477088 | | 20030224 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-156527 | A | 20020529 |
| AU 2003217676 | A1 | 20031008 | WO 2003-US5524 | W | 20030224 |
| | | | AU 2003-217676 | | 20030224 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-156527 | A | 20020529 |
| EP 1490090 | A2 | 20041229 | WO 2003-US5524 | W | 20030224 |
| | | | EP 2003-713634 | | 20030224 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-156527 | A | 20020529 |
| | | | WO 2003-US5524 | W | 20030224 |
| JP 2005524677 | T2 | 20050818 | JP 2003-577805 | | 20030224 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-156527 | A | 20020529 |
| | | | WO 2003-US5524 | W | 20030224 |
| FAN 2003:971909 | | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
| PI WO 2003101476 | A1 | 20031211 | WO 2003-US17009 | | 20030529 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | | |
| US 2004063628 | A1 | 20040401 | US 2002-156527 | A | 20020529 |
| US 7060708 | B2 | 20060613 | US 2002-156527 | | 20020529 |
| | | | US 1999-265415 | B2 | 19990310 |
| | | | US 1999-411238 | B2 | 19991004 |
| | | | WO 2000-US5693 | A | 20000306 |
| | | | US 2000-642820 | A2 | 20000822 |
| | | | US 2000-248620P | P | 20001116 |
| | | | US 2000-248656P | P | 20001116 |
| | | | US 2000-248658P | P | 20001116 |
| | | | US 2000-248659P | P | 20001116 |

| | | | | | | |
|-----|---------------|------|----------|-----------------|----|----------|
| | | | | US 2000-248660P | P | 20001116 |
| | | | | US 2000-248662P | P | 20001116 |
| | | | | US 2000-248663P | P | 20001116 |
| | | | | US 2000-248685P | P | 20001116 |
| | | | | US 2000-248737P | P | 20001116 |
| | | | | US 2000-248738P | P | 20001116 |
| | | | | US 2000-248764P | P | 20001116 |
| | | | | US 2000-248767P | P | 20001116 |
| | | | | US 2000-248768P | P | 20001116 |
| | | | | US 2000-248769P | P | 20001116 |
| | | | | US 2000-248770P | P | 20001116 |
| | | | | US 2000-248771P | P | 20001116 |
| | | | | US 2000-248772P | P | 20001116 |
| | | | | US 2000-248774P | P | 20001116 |
| | | | | US 2000-248776P | P | 20001116 |
| | | | | US 2000-248777P | P | 20001116 |
| | | | | US 2000-248778P | P | 20001116 |
| | | | | US 2000-248779P | P | 20001116 |
| | | | | US 2000-248782P | P | 20001116 |
| | | | | US 2000-248787P | P | 20001116 |
| | | | | US 2000-248794P | P | 20001116 |
| | | | | US 2000-248795P | P | 20001116 |
| | | | | US 2000-248796P | P | 20001116 |
| | | | | US 2000-248797P | P | 20001116 |
| | | | | US 2001-933708 | A2 | 20010822 |
| | | | | US 2001-986426 | A2 | 20011108 |
| | | | | US 2001-987458 | B2 | 20011114 |
| | | | | WO 2001-US43089 | B2 | 20011114 |
| | | | | US 2001-988034 | B2 | 20011116 |
| | | | | US 2001-988071 | B2 | 20011116 |
| | | | | WO 2001-US43115 | B2 | 20011116 |
| | | | | WO 2001-US43117 | B2 | 20011116 |
| | | | | US 2002-358381P | P | 20020222 |
| | | | | US 2002-366258P | P | 20020322 |
| | AU 2003240949 | A1 | 20031219 | AU 2003-240949 | | 20030529 |
| | | | | US 2002-156527 | A | 20020529 |
| | | | | WO 2003-US17009 | W | 20030529 |
| FAN | 2004:269853 | | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
| | ----- | ---- | ----- | ----- | | ----- |
| PI | US 2004063628 | A1 | 20040401 | US 2002-156527 | | 20020529 |
| | US 7060708 | B2 | 20060613 | | | |
| | | | | US 1999-265415 | B2 | 19990310 |
| | | | | US 1999-411238 | B2 | 19991004 |
| | | | | WO 2000-US5693 | A | 20000306 |
| | | | | US 2000-642820 | A2 | 20000822 |
| | | | | US 2000-248620P | P | 20001116 |
| | | | | US 2000-248656P | P | 20001116 |
| | | | | US 2000-248658P | P | 20001116 |
| | | | | US 2000-248659P | P | 20001116 |
| | | | | US 2000-248660P | P | 20001116 |
| | | | | US 2000-248662P | P | 20001116 |
| | | | | US 2000-248663P | P | 20001116 |
| | | | | US 2000-248685P | P | 20001116 |
| | | | | US 2000-248737P | P | 20001116 |
| | | | | US 2000-248738P | P | 20001116 |
| | | | | US 2000-248764P | P | 20001116 |
| | | | | US 2000-248767P | P | 20001116 |
| | | | | US 2000-248768P | P | 20001116 |
| | | | | US 2000-248769P | P | 20001116 |
| | | | | US 2000-248770P | P | 20001116 |

| | | | | | |
|---------------|--|----------|-----------------|----|----------|
| | | | US 2000-248771P | P | 20001116 |
| | | | US 2000-248772P | P | 20001116 |
| | | | US 2000-248774P | P | 20001116 |
| | | | US 2000-248776P | P | 20001116 |
| | | | US 2000-248777P | P | 20001116 |
| | | | US 2000-248778P | P | 20001116 |
| | | | US 2000-248779P | P | 20001116 |
| | | | US 2000-248782P | P | 20001116 |
| | | | US 2000-248787P | P | 20001116 |
| | | | US 2000-248794P | P | 20001116 |
| | | | US 2000-248795P | P | 20001116 |
| | | | US 2000-248796P | P | 20001116 |
| | | | US 2000-248797P | P | 20001116 |
| | | | US 2001-933708 | A2 | 20010822 |
| | | | US 2001-986426 | A2 | 20011108 |
| | | | US 2001-987458 | B2 | 20011114 |
| | | | WO 2001-US43089 | B2 | 20011114 |
| | | | US 2001-988034 | B2 | 20011116 |
| | | | US 2001-988071 | B2 | 20011116 |
| | | | WO 2001-US43115 | B2 | 20011116 |
| | | | WO 2001-US43117 | B2 | 20011116 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |
| WO 2000052078 | A1 | 20000908 | WO 2000-US5693 | | 20000306 |
| W: | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: | GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 6716452 | B1 | 20040406 | US 1999-123146P | P | 19990305 |
| US 2002099013 | A1 | 20020725 | US 2000-642820 | | 20000822 |
| | | | US 2001-933708 | | 20010822 |
| | | | US 2000-247556P | P | 20001114 |
| | | | US 2000-247558P | P | 20001114 |
| | | | US 2000-247559P | P | 20001114 |
| | | | US 2000-247560P | P | 20001114 |
| | | | US 2000-247561P | P | 20001114 |
| | | | US 2000-247594P | P | 20001114 |
| | | | US 2000-247595P | P | 20001114 |
| | | | US 2000-247606P | P | 20001114 |
| | | | US 2000-247607P | P | 20001114 |
| | | | US 2000-247608P | P | 20001114 |
| | | | US 2000-247609P | P | 20001114 |
| | | | US 2000-247610P | P | 20001114 |
| | | | US 2000-247611P | P | 20001114 |
| | | | US 2000-247612P | P | 20001114 |
| | | | US 2000-247620P | P | 20001114 |
| | | | US 2000-247621P | P | 20001114 |
| | | | US 2000-247634P | P | 20001114 |
| | | | US 2000-247635P | P | 20001114 |
| | | | US 2000-247698P | P | 20001114 |
| | | | US 2000-247699P | P | 20001114 |
| | | | US 2000-247700P | P | 20001114 |
| | | | US 2000-247701P | P | 20001114 |
| | | | US 2000-247702P | P | 20001114 |
| | | | US 2000-247797P | P | 20001114 |
| | | | US 2000-247798P | P | 20001114 |
| | | | US 2000-247799P | P | 20001114 |

| | | | | | |
|---------------|--|----------|-----------------|----|----------|
| | | | US 2000-247800P | P | 20001114 |
| | | | US 2000-247801P | P | 20001114 |
| | | | US 2000-247802P | P | 20001114 |
| | | | US 2000-247803P | P | 20001114 |
| | | | US 2000-247804P | P | 20001114 |
| | | | US 2000-247805P | P | 20001114 |
| | | | US 2000-247807P | P | 20001114 |
| | | | US 2000-247832P | P | 20001114 |
| | | | US 2000-247833P | P | 20001114 |
| | | | US 2000-247926P | P | 20001114 |
| | | | US 2000-247927P | P | 20001114 |
| | | | US 2000-247928P | P | 20001114 |
| | | | US 2000-247929P | P | 20001114 |
| | | | US 2000-247930P | P | 20001114 |
| US 2002128177 | A1 | 20020912 | US 2001-986426 | | 20011108 |
| US 7018654 | B2 | 20060328 | | | |
| | | | US 1999-123146P | P | 19990305 |
| | | | US 1999-265415 | B2 | 19990310 |
| | | | US 1999-411238 | B2 | 19991004 |
| | | | WO 2000-US5693 | W | 20000306 |
| | | | US 2001-959396 | B2 | 20011024 |
| WO 2003034980 | A2 | 20030501 | WO 2001-US43089 | | 20011114 |
| WO 2003034980 | C1 | 20031120 | | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | US 2000-274622P | P | 20001114 |
| WO 2002051432 | A1 | 20020704 | WO 2001-US43115 | | 20011116 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| WO 2003020200 | A2 | 20030313 | WO 2001-US43117 | | 20011116 |
| WO 2003020200 | A3 | 20030912 | | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | US 2000-248600P | P | 20001116 |
| | | | US 2000-248601P | P | 20001116 |
| | | | US 2000-248603P | P | 20001116 |
| | | | US 2000-248604P | P | 20001116 |
| | | | US 2000-248606P | P | 20001116 |

| | | | | | |
|---------------|--|----------|-----------------|---|----------|
| | | | US 2000-248607P | P | 20001116 |
| | | | US 2000-248608P | P | 20001116 |
| | | | US 2000-248609P | P | 20001116 |
| | | | US 2000-248611P | P | 20001116 |
| | | | US 2000-248689P | P | 20001116 |
| | | | US 2000-248691P | P | 20001116 |
| | | | US 2000-248692P | P | 20001116 |
| | | | US 2000-248693P | P | 20001116 |
| | | | US 2000-248694P | P | 20001116 |
| | | | US 2000-248695P | P | 20001116 |
| | | | US 2000-248696P | P | 20001116 |
| | | | US 2000-248697P | P | 20001116 |
| | | | US 2000-248698P | P | 20001116 |
| | | | US 2000-248701P | P | 20001116 |
| | | | US 2000-248702P | P | 20001116 |
| | | | US 2000-248703P | P | 20001116 |
| | | | US 2000-248704P | P | 20001116 |
| | | | US 2000-248705P | P | 20001116 |
| | | | US 2000-248706P | P | 20001116 |
| | | | US 2000-248707P | P | 20001116 |
| | | | US 2000-248708P | P | 20001116 |
| | | | US 2000-248709P | P | 20001116 |
| | | | US 2000-248710P | P | 20001116 |
| | | | US 2000-248711P | P | 20001116 |
| | | | US 2000-248712P | P | 20001116 |
| WO 2003072047 | A2 | 20030904 | WO 2003-US5526 | | 20030224 |
| WO 2003072047 | A3 | 20040617 | | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-136433 | A | 20020502 |
| | | | US 2002-156527 | A | 20020529 |
| AU 2003216382 | A1 | 20030909 | AU 2003-216382 | | 20030224 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-136433 | A | 20020502 |
| | | | US 2002-156527 | A | 20020529 |
| CA 2477088 | AA | 20031002 | WO 2003-US5526 | W | 20030224 |
| | | | CA 2003-2477088 | | 20030224 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-156527 | A | 20020529 |
| | | | WO 2003-US5524 | W | 20030224 |
| WO 2003079972 | A2 | 20031002 | WO 2003-US5524 | | 20030224 |
| WO 2003079972 | A3 | 20040318 | | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, | | | | |

| | | | |
|---------------|--|----------|--|
| | | | KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG |
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-366258P P 20020322 |
| | | | US 2002-156527 A 20020529 |
| AU 2003217676 | A1 | 20031008 | AU 2003-217676 20030224 |
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-366258P P 20020322 |
| | | | US 2002-156527 A 20020529 |
| | | | WO 2003-US5524 W 20030224 |
| EP 1490090 | A2 | 20041229 | EP 2003-713634 20030224 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | |
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-366258P P 20020322 |
| | | | US 2002-156527 A 20020529 |
| | | | WO 2003-US5524 W 20030224 |
| CN 1649614 | A | 20050803 | CN 2003-808717 20030224 |
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-366258P P 20020322 |
| | | | US 2002-156527 A 20020529 |
| JP 2005524677 | T2 | 20050818 | JP 2003-577805 20030224 |
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-366258P P 20020322 |
| | | | US 2002-156527 A 20020529 |
| | | | WO 2003-US5524 W 20030224 |
| WO 2003101476 | A1 | 20031211 | WO 2003-US17009 20030529 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | |
| | | | US 2002-156527 A 20020529 |
| AU 2003240949 | A1 | 20031219 | AU 2003-240949 20030529 |
| | | | US 2002-156527 A 20020529 |
| | | | WO 2003-US17009 W 20030529 |
| US 2004127397 | A1 | 20040701 | US 2003-727565 20031205 |
| | | | US 2000-642820 A3 20000822 |
| US 2006014697 | A1 | 20060119 | US 2005-89056 20050325 |
| | | | US 2001-933708 A2 20010822 |
| | | | US 2002-358368P P 20020222 |
| | | | US 2002-358381P P 20020222 |
| | | | US 2002-362082P P 20020307 |
| | | | US 2002-366258P P 20020322 |
| | | | US 2002-156527 A2 20020529 |
| | | | WO 2003-US5525 A2 20030224 |
| | | | US 2003-507012P P 20030930 |
| | | | US 2004-567800P P 20040505 |
| | | | US 2004-567802P P 20040505 |
| | | | US 2004-568011P P 20040505 |
| | | | US 2004-923088 A2 20040823 |
| | | | US 2004-923257 A2 20040823 |
| | | | US 2004-953110 A2 20040930 |
| | | | US 2004-953111 A2 20040930 |
| | | | US 2004-953116 A2 20040930 |

| | | | | | |
|---------------|---|----|----------|-----------------|-------------|
| | | | | US 2004-953119 | A2 20040930 |
| | | | | US 2004-955006 | A2 20040930 |
| | | | | WO 2004-US32131 | A2 20040930 |
| FAN | 2004:372841 | | | | |
| | PATENT NO. | | | | |
| | ----- | | | | |
| PI | US 2004087483 | A1 | 20040506 | US 2002-136433 | 20020502 |
| | | | | US 2000-642820 | A2 20000822 |
| | | | | US 2000-248607P | P 20001116 |
| | | | | US 2001-933708 | A2 20010822 |
| | US 6716452 | B1 | 20040406 | US 2000-642820 | 20000822 |
| | US 2002099013 | A1 | 20020725 | US 2001-933708 | 20010822 |
| | | | | US 2000-247556P | P 20001114 |
| | | | | US 2000-247558P | P 20001114 |
| | | | | US 2000-247559P | P 20001114 |
| | | | | US 2000-247560P | P 20001114 |
| | | | | US 2000-247561P | P 20001114 |
| | | | | US 2000-247594P | P 20001114 |
| | | | | US 2000-247595P | P 20001114 |
| | | | | US 2000-247606P | P 20001114 |
| | | | | US 2000-247607P | P 20001114 |
| | | | | US 2000-247608P | P 20001114 |
| | | | | US 2000-247609P | P 20001114 |
| | | | | US 2000-247610P | P 20001114 |
| | | | | US 2000-247611P | P 20001114 |
| | | | | US 2000-247612P | P 20001114 |
| | | | | US 2000-247620P | P 20001114 |
| | | | | US 2000-247621P | P 20001114 |
| | | | | US 2000-247634P | P 20001114 |
| | | | | US 2000-247635P | P 20001114 |
| | | | | US 2000-247698P | P 20001114 |
| | | | | US 2000-247699P | P 20001114 |
| | | | | US 2000-247700P | P 20001114 |
| | | | | US 2000-247701P | P 20001114 |
| | | | | US 2000-247702P | P 20001114 |
| | | | | US 2000-247797P | P 20001114 |
| | | | | US 2000-247798P | P 20001114 |
| | | | | US 2000-247799P | P 20001114 |
| | | | | US 2000-247800P | P 20001114 |
| | | | | US 2000-247801P | P 20001114 |
| | | | | US 2000-247802P | P 20001114 |
| | | | | US 2000-247803P | P 20001114 |
| | | | | US 2000-247804P | P 20001114 |
| | | | | US 2000-247805P | P 20001114 |
| | | | | US 2000-247807P | P 20001114 |
| | | | | US 2000-247832P | P 20001114 |
| | | | | US 2000-247833P | P 20001114 |
| | | | | US 2000-247926P | P 20001114 |
| | | | | US 2000-247927P | P 20001114 |
| | | | | US 2000-247928P | P 20001114 |
| | | | | US 2000-247929P | P 20001114 |
| | | | | US 2000-247930P | P 20001114 |
| WO 2003072047 | | A2 | 20030904 | WO 2003-US5526 | 20030224 |
| WO 2003072047 | | A3 | 20040617 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, | | | | |
| | CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, | | | | |
| | GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, | | | | |
| | LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, | | | | |
| | PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, | | | | |
| | UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, | | | | |

| | | | | | |
|---|--|----------|------------------|-----------------|------------|
| | KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | US 2002-358381P | P 20020222 |
| | | | | US 2002-366258P | P 20020322 |
| | | | | US 2002-136433 | A 20020502 |
| | | | | US 2002-156527 | A 20020529 |
| AU 2003216382 | A1 | 20030909 | AU 2003-216382 | | 20030224 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-136433 | A | 20020502 |
| | | | US 2002-156527 | A | 20020529 |
| | | | WO 2003-US5526 | W | 20030224 |
| US 2004127397 | A1 | 20040701 | US 2003-727565 | | 20031205 |
| | | | US 2000-642820 | A3 | 20000822 |
| FAN 2005:14241 | | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
| ----- | ----- | ----- | ----- | ----- | |
| PI WO 2005000334 | A1 | 20050106 | WO 2004-US17204 | | 20040601 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | | |
| | | | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| AU 2004251647 | A1 | 20050106 | AU 2004-251647 | | 20040601 |
| | | | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| | | | WO 2004-US17204 | W | 20040601 |
| CA 2527646 | AA | 20050106 | CA 2004-2527646 | | 20040601 |
| | | | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| | | | WO 2004-US17204 | W | 20040601 |
| US 2005038121 | A1 | 20050217 | US 2004-857619 | | 20040601 |
| | | | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| EP 1644019 | A1 | 20060412 | EP 2004-753925 | | 20040601 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK | | | | | |
| | | | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| | | | WO 2004-US17204 | W | 20040601 |
| BR 2004010792 | A | 20060801 | BR 2004-10792 | | 20040601 |
| | | | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| | | | WO 2004-US17204 | W | 20040601 |
| CN 1816346 | A | 20060809 | CN 2004-80019089 | | 20040601 |
| | | | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| | | | WO 2004-US17204 | W | 20040601 |
| NO 2005006211 | A | 20060227 | NO 2005-6211 | | 20051228 |
| | | | US 2003-473929P | P | 20030529 |
| | | | US 2004-567801P | P | 20040505 |
| | | | WO 2004-US17204 | W | 20040601 |

| FAN | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--|------|----------|-----------------|-------------|
| PI | US 2005054561 | A1 | 20050310 | US 2004-858526 | 20040601 |
| | US 7105486 | B2 | 20060912 | | |
| | | | | US 2002-358368P | P 20020222 |
| | | | | US 2002-362082P | P 20020307 |
| | | | | WO 2003-US5525 | A2 20030224 |
| | | | | US 2003-473929P | P 20030529 |
| | | | | US 2004-567801P | P 20040505 |
| WO 2003072046 | | A2 | 20030904 | WO 2003-US5525 | 20030224 |
| WO 2003072046 | | A3 | 20050310 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VZ, VN, YU, ZA, ZM, ZW | | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | US 2002-358368P | P 20020222 |
| | | | | US 2002-362082P | P 20020307 |
| FAN | 2005:316314 | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| PI | WO 2005032474 | A2 | 20050414 | WO 2004-US32131 | 20040930 |
| | WO 2005032474 | A3 | 20060921 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VZ, VN, YU, ZA, ZM, ZW | | | | |
| RW: | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | US 2003-507012P | P 20030930 |
| | | | | US 2004-567800P | P 20040505 |
| | | | | US 2004-567802P | P 20040505 |
| | | | | US 2004-568011P | P 20040505 |
| AU 2004277400 | | A1 | 20050414 | AU 2004-277400 | 20040930 |
| | | | | US 2003-507012P | P 20030930 |
| | | | | US 2004-567800P | P 20040505 |
| | | | | US 2004-567802P | P 20040505 |
| | | | | US 2004-568011P | P 20040505 |
| | | | | WO 2004-US32131 | W 20040930 |
| CA 2540678 | | AA | 20050414 | CA 2004-2540678 | 20040930 |
| | | | | US 2003-507012P | P 20030930 |
| | | | | US 2004-567800P | P 20040505 |
| | | | | US 2004-567802P | P 20040505 |
| | | | | US 2004-568011P | P 20040505 |
| | | | | WO 2004-US32131 | W 20040930 |
| EP 1675555 | | A2 | 20060705 | EP 2004-789333 | 20040930 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR | | | | |
| | | | | US 2003-507012P | P 20030930 |
| | | | | US 2004-567800P | P 20040505 |

| | | | | | |
|------------------|--|----------|-----------------|----|----------|
| US 2006014697 | A1 | 20060119 | US 2004-567802P | P | 20040505 |
| | | | US 2004-568011P | P | 20040505 |
| | | | WO 2004-US32131 | W | 20040930 |
| | | | US 2005-89056 | | 20050325 |
| | | | US 2001-933708 | A2 | 20010822 |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-156527 | A2 | 20020529 |
| | | | WO 2003-US5525 | A2 | 20030224 |
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| | | | US 2004-567802P | P | 20040505 |
| | | | US 2004-568011P | P | 20040505 |
| | | | US 2004-923088 | A2 | 20040823 |
| | | | US 2004-923257 | A2 | 20040823 |
| | | | US 2004-953110 | A2 | 20040930 |
| | | | US 2004-953111 | A2 | 20040930 |
| | | | US 2004-953116 | A2 | 20040930 |
| | | | US 2004-953119 | A2 | 20040930 |
| | | | US 2004-955006 | A2 | 20040930 |
| | | | WO 2004-US32131 | A2 | 20040930 |
| NO 2006001925 | A | 20060629 | NO 2006-1925 | | 20060428 |
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| | | | US 2004-567802P | P | 20040505 |
| | | | US 2004-568011P | P | 20040505 |
| | | | WO 2004-US32131 | W | 20040930 |
| FAN 2005:325685 | | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
| ----- | ---- | ----- | ----- | | ----- |
| PI US 2005080012 | A1 | 20050414 | US 2004-923257 | | 20040823 |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | WO 2003-US5525 | A2 | 20030224 |
| WO 2003072046 | A2 | 20030904 | WO 2003-US5525 | | 20030224 |
| WO 2003072046 | A3 | 20050310 | | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 2006014697 | A1 | 20060119 | US 2002-358368P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | US 2005-89056 | | 20050325 |
| | | | US 2001-933708 | A2 | 20010822 |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-358381P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | US 2002-366258P | P | 20020322 |
| | | | US 2002-156527 | A2 | 20020529 |
| | | | WO 2003-US5525 | A2 | 20030224 |
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| | | | US 2004-567802P | P | 20040505 |

| | | | | | | |
|-----|---------------|--|----------|-----------------|----|----------|
| | | | | US 2004-568011P | P | 20040505 |
| | | | | US 2004-923088 | A2 | 20040823 |
| | | | | US 2004-923257 | A2 | 20040823 |
| | | | | US 2004-953110 | A2 | 20040930 |
| | | | | US 2004-953111 | A2 | 20040930 |
| | | | | US 2004-953116 | A2 | 20040930 |
| | | | | US 2004-953119 | A2 | 20040930 |
| | | | | US 2004-955006 | A2 | 20040930 |
| | | | | WO 2004-US32131 | A2 | 20040930 |
| FAN | 2005:735301 | | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
| PI | US 2005176645 | A1 | 20050811 | US 2004-953116 | | 20040930 |
| | | | | US 2002-358368P | P | 20020222 |
| | | | | US 2002-362082P | P | 20020307 |
| | | | | WO 2003-US5525 | A2 | 20030224 |
| | | | | US 2003-507012P | P | 20030930 |
| | | | | US 2004-567800P | P | 20040505 |
| | | | | US 2004-568011P | P | 20040505 |
| | | | | US 2004-927257 | A2 | 20040827 |
| | | | | WO 2003-US5525 | | 20030224 |
| | WO 2003072046 | A2 | 20030904 | | | |
| | WO 2003072046 | A3 | 20050310 | | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | US 2002-358368P | P | 20020222 |
| | | | | US 2002-362082P | P | 20020307 |
| | US 2006014697 | A1 | 20060119 | US 2005-89056 | | 20050325 |
| | | | | US 2001-933708 | A2 | 20010822 |
| | | | | US 2002-358368P | P | 20020222 |
| | | | | US 2002-358381P | P | 20020222 |
| | | | | US 2002-362082P | P | 20020307 |
| | | | | US 2002-366258P | P | 20020322 |
| | | | | US 2002-156527 | A2 | 20020529 |
| | | | | WO 2003-US5525 | A2 | 20030224 |
| | | | | US 2003-507012P | P | 20030930 |
| | | | | US 2004-567800P | P | 20040505 |
| | | | | US 2004-567802P | P | 20040505 |
| | | | | US 2004-568011P | P | 20040505 |
| | | | | US 2004-923088 | A2 | 20040823 |
| | | | | US 2004-923257 | A2 | 20040823 |
| | | | | US 2004-953110 | A2 | 20040930 |
| | | | | US 2004-953111 | A2 | 20040930 |
| | | | | US 2004-953116 | A2 | 20040930 |
| | | | | US 2004-953119 | A2 | 20040930 |
| | | | | US 2004-955006 | A2 | 20040930 |
| | | | | WO 2004-US32131 | A2 | 20040930 |
| FAN | 2006:57009 | | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
| PI | US 2006014697 | A1 | 20060119 | US 2005-89056 | | 20050325 |
| | | | | US 2001-933708 | A2 | 20010822 |
| | | | | US 2002-358368P | P | 20020222 |
| | | | | US 2002-358381P | P | 20020222 |

| | | | | |
|---------------|----|-----------------|----|----------|
| | | US 2002-362082P | P | 20020307 |
| | | US 2002-366258P | P | 20020322 |
| | | US 2002-156527 | A2 | 20020529 |
| | | WO 2003-US5525 | A2 | 20030224 |
| | | US 2003-507012P | P | 20030930 |
| | | US 2004-567800P | P | 20040505 |
| | | US 2004-567802P | P | 20040505 |
| | | US 2004-568011P | P | 20040505 |
| | | US 2004-923088 | A2 | 20040823 |
| | | US 2004-923257 | A2 | 20040823 |
| | | US 2004-953110 | A2 | 20040930 |
| | | US 2004-953111 | A2 | 20040930 |
| | | US 2004-953116 | A2 | 20040930 |
| | | US 2004-953119 | A2 | 20040930 |
| | | US 2004-955006 | A2 | 20040930 |
| | | WO 2004-US32131 | A2 | 20040930 |
| US 2002099013 | A1 | 20020725 | | |
| | | US 2001-933708 | | 20010822 |
| | | US 2000-247556P | P | 20001114 |
| | | US 2000-247558P | P | 20001114 |
| | | US 2000-247559P | P | 20001114 |
| | | US 2000-247560P | P | 20001114 |
| | | US 2000-247561P | P | 20001114 |
| | | US 2000-247594P | P | 20001114 |
| | | US 2000-247595P | P | 20001114 |
| | | US 2000-247606P | P | 20001114 |
| | | US 2000-247607P | P | 20001114 |
| | | US 2000-247608P | P | 20001114 |
| | | US 2000-247609P | P | 20001114 |
| | | US 2000-247610P | P | 20001114 |
| | | US 2000-247611P | P | 20001114 |
| | | US 2000-247612P | P | 20001114 |
| | | US 2000-247620P | P | 20001114 |
| | | US 2000-247621P | P | 20001114 |
| | | US 2000-247634P | P | 20001114 |
| | | US 2000-247635P | P | 20001114 |
| | | US 2000-247698P | P | 20001114 |
| | | US 2000-247699P | P | 20001114 |
| | | US 2000-247700P | P | 20001114 |
| | | US 2000-247701P | P | 20001114 |
| | | US 2000-247702P | P | 20001114 |
| | | US 2000-247797P | P | 20001114 |
| | | US 2000-247798P | P | 20001114 |
| | | US 2000-247799P | P | 20001114 |
| | | US 2000-247800P | P | 20001114 |
| | | US 2000-247801P | P | 20001114 |
| | | US 2000-247802P | P | 20001114 |
| | | US 2000-247803P | P | 20001114 |
| | | US 2000-247804P | P | 20001114 |
| | | US 2000-247805P | P | 20001114 |
| | | US 2000-247807P | P | 20001114 |
| | | US 2000-247832P | P | 20001114 |
| | | US 2000-247833P | P | 20001114 |
| | | US 2000-247926P | P | 20001114 |
| | | US 2000-247927P | P | 20001114 |
| | | US 2000-247928P | P | 20001114 |
| | | US 2000-247929P | P | 20001114 |
| | | US 2000-247930P | P | 20001114 |
| US 2004063628 | A1 | 20040401 | | |
| US 7060708 | B2 | 20060613 | | |
| | | US 2002-156527 | | 20020529 |
| | | US 1999-265415 | B2 | 19990310 |
| | | US 1999-411238 | B2 | 19991004 |

| | | |
|-----------------|--|----------------------------|
| WO 2000-US5693 | A | 20000306 |
| US 2000-642820 | A2 | 20000822 |
| US 2000-248620P | P | 20001116 |
| US 2000-248656P | P | 20001116 |
| US 2000-248658P | P | 20001116 |
| US 2000-248659P | P | 20001116 |
| US 2000-248660P | P | 20001116 |
| US 2000-248662P | P | 20001116 |
| US 2000-248663P | P | 20001116 |
| US 2000-248685P | P | 20001116 |
| US 2000-248737P | P | 20001116 |
| US 2000-248738P | P | 20001116 |
| US 2000-248764P | P | 20001116 |
| US 2000-248767P | P | 20001116 |
| US 2000-248768P | P | 20001116 |
| US 2000-248769P | P | 20001116 |
| US 2000-248770P | P | 20001116 |
| US 2000-248771P | P | 20001116 |
| US 2000-248772P | P | 20001116 |
| US 2000-248774P | P | 20001116 |
| US 2000-248776P | P | 20001116 |
| US 2000-248777P | P | 20001116 |
| US 2000-248778P | P | 20001116 |
| US 2000-248779P | P | 20001116 |
| US 2000-248782P | P | 20001116 |
| US 2000-248787P | P | 20001116 |
| US 2000-248794P | P | 20001116 |
| US 2000-248795P | P | 20001116 |
| US 2000-248796P | P | 20001116 |
| US 2000-248797P | P | 20001116 |
| US 2001-933708 | A2 | 20010822 |
| US 2001-986426 | A2 | 20011108 |
| US 2001-987458 | B2 | 20011114 |
| WO 2001-US43089 | B2 | 20011114 |
| US 2001-988034 | B2 | 20011116 |
| US 2001-988071 | B2 | 20011116 |
| WO 2001-US43115 | B2 | 20011116 |
| WO 2001-US43117 | B2 | 20011116 |
| US 2002-358381P | P | 20020222 |
| US 2002-366258P | P | 20020322 |
| WO 2003-US5525 | | 20030224 |
| WO 2003072046 | A2 | 20030904 |
| WO 2003072046 | A3 | 20050310 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | |
| US 2005080012 | A1 | 20050414 |
| | | US 2002-358368P P 20020222 |
| | | US 2002-362082P P 20020307 |
| | | US 2004-923257 20040823 |
| | | US 2002-358368P P 20020222 |
| | | US 2002-362082P P 20020307 |
| WO 2005032474 | A2 | 20050414 |
| WO 2005032474 | A3 | 20060921 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, | |

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW,
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
 SN, TD, TG

| | | | | | |
|---------------|----|----------|-----------------|----|----------|
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| | | | US 2004-567802P | P | 20040505 |
| | | | US 2004-568011P | P | 20040505 |
| US 2005176645 | A1 | 20050811 | US 2004-953116 | | 20040930 |
| | | | US 2002-358368P | P | 20020222 |
| | | | US 2002-362082P | P | 20020307 |
| | | | WO 2003-US5525 | A2 | 20030224 |
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| | | | US 2004-568011P | P | 20040505 |
| | | | US 2004-927257 | A2 | 20040827 |
| US 2005176646 | A1 | 20050811 | US 2004-953119 | | 20040930 |
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| | | | US 2004-567802P | P | 20040505 |
| | | | US 2004-568011P | P | 20040505 |
| US 2005176644 | A1 | 20050811 | US 2004-955006 | | 20040930 |
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| | | | US 2004-567802P | P | 20040505 |
| US 2005266070 | A1 | 20051201 | US 2004-953110 | | 20040930 |
| | | | US 2003-507012P | P | 20030930 |
| | | | US 2004-567800P | P | 20040505 |
| | | | US 2004-568011P | P | 20040505 |

AB Claimed are compns. comprising a polypeptide and an active agent covalently attached to the polypeptide and a method for delivery of an active agent to a patient by administering the composition to the patient. The peptide is a homopolymer of a naturally occurring amino acid or a heteropolymer of two or more naturally occurring amino acids. In an example, (Glu)n-cephalexin was prepared from Glu(OBut)NCA and cephalixin hydrochloride.

IT 124937-52-6, Tolterodine tartrate

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (compns. comprising a polypeptide and an active agent)

RN 124937-52-6 CAPLUS

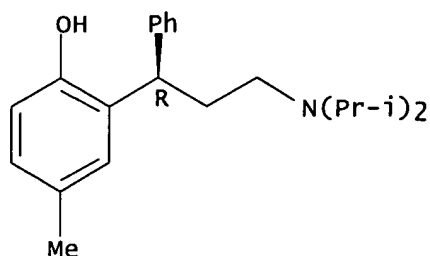
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
 (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

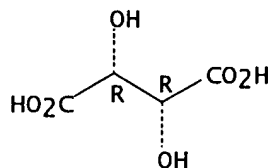
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 71 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:314176 CAPLUS

DN 137:41178

TI Once-daily, extended-release formulations of antimuscarinic agents in the treatment of overactive bladder: a review

AU Rovner, Eric S.; Wein, Alan J.

CS Division of Urology, University of Pennsylvania School of Medicine, Philadelphia, PA, 19104, USA

SO European Urology (2002), 41(1), 6-14

CODEN: EUURAV; ISSN: 0302-2838

PB Elsevier Science B.V.

DT Journal; General Review

LA English

AB A review. Overactive bladder (OAB) is a chronic condition that often requires long-term treatment to maintain control of symptoms. A range of therapeutic options are available; however, antimuscarinic agents form the mainstay of treatment. Of these agents, tolterodine and oxybutynin are the most widely used. It is well documented that the immediate-release (IR) formulations of these agents have equivalent efficacy in relieving OAB symptoms. However, tolterodine demonstrates a more favorable tolerability profile, particularly in terms of the frequency and severity of dry mouth. Due to the development of novel drug delivery systems, extended-release (ER) formulations of both oxybutynin and tolterodine are now available, permitting once-daily dosing. The convenience of once-daily dosing of antimuscarinic agents would be expected to improve patient compliance and further relieve the symptoms of OAB. Clin. studies with the ER formulations of tolterodine and oxybutynin demonstrate potential clin. advantages over their resp. IR forms in terms of either efficacy or tolerability or both, although the therapeutic index of tolterodine ER appears to show a greater advantage over its IR counterpart compared with oxybutynin ER and its IR form. Importantly, the two ER agents have not

been compared directly in a head-to-head clin. study. Overall, available clin. data suggest that the newly developed ER formulation of tolterodine represents a significant therapeutic advancement in the treatment of OAB.

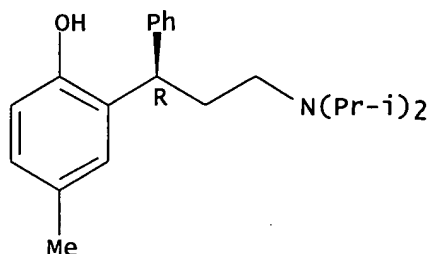
IT 124937-52-6, Tolterodine tartrate
 RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (Detrol; once-daily, extended-release formulations of antimuscarinic agents in treatment of overactive bladder in women)

RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5
 CMF C22 H31 N O

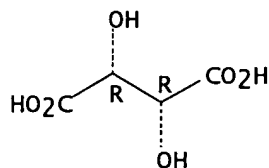
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.



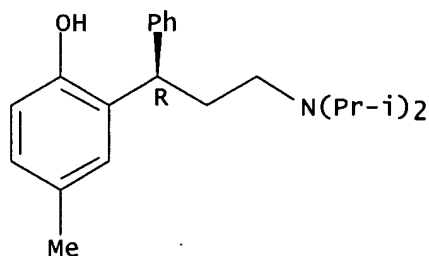
RE.CNT 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 72 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2001:844452 CAPLUS
 DN 136:299846
 TI Determination of levo-enantiomer in tolterodine tartrate by HPCE
 AU Huang, Zongyu; Du, Jiaqiu; Cai, Wen
 CS Zhejiang Institute for Drug Control, Hangzhou, 310004, Peop. Rep. China
 SO Yaowu Fenxi Zazhi (2001), 21(5), 351-354
 CODEN: YFZADL; ISSN: 0254-1793
 PB Yaowu Fenxi Zazhi Bianji Weiyuanhui
 DT Journal
 LA Chinese
 AB A high performance capillary electrophoresis (HPCE) method for determination of

the levo-enantiomer of tolterodine tartrate was established. Both complexation and resolution were affected by the cyclodextrin (CD) type, CD concentration and the pH of electrolyte. The influence of working voltage and capillary temperature on the enantiomer separation was also analyzed. Electrophoretic medium was 0.1 mol L⁻¹ trihydroxymethylaminomethane buffer (adjust pH to 3.0 with H₃PO₄) containing 20 mmol L⁻¹ hydroxypropyl- β -cyclodextrin. An uncoated capillary was 57 cm x 50 μ m (50 cm to the detector). Detection was carried out with a UV detector at 204 nm. The separation was performed at 15° with a pos. voltage of 20 kv. Samples were injected into the capillary by pressure for 3 s. The enantiomers of tolterodine tartrate was separated well. The linear concentration region was 0.001-1.5 mg mL⁻¹. The RSD for migratory time and peak response were < 4.1% and 4.9% resp. The recovery for levo-enantiomer was 102.1% (n=6). The lowest detective concentration was 0.5 μ g mL⁻¹ for each enantiomer. This method was suitable for check levo-enantiomer in tolterodine tartrate in laboratory

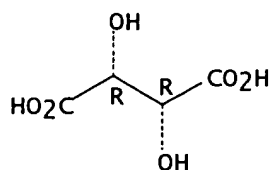
IT 124937-52-6, Tolterodine tartrate
 RL: ANT (Analyte); ANST (Analytical study)
 (determination of tolterodine tartrate by high performance capillary electrophoresis)
 RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)
 CM 1
 CRN 124937-51-5
 CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).



CM 2
 CRN 87-69-4
 CMF C4 H6 O6

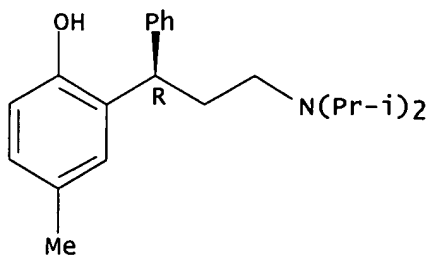
Absolute stereochemistry.



L11 ANSWER 73 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2001:835896 CAPLUS

DN 136:128468
 TI Evidence for the efficacy and safety of tolterodine in the treatment of overactive bladder
 AU Abrams, Paul
 CS Bristol Urological Institute, Southmead Hospital, Bristol, BS10 5NB, UK
 SO Expert Opinion on Pharmacotherapy (2001), 2(10), 1685-1701
 CODEN: EOPHF7; ISSN: 1465-6566
 PB Ashley Publications Ltd.
 DT Journal; General Review
 LA English
 AB A review. Overactive bladder (OAB) is a chronic and prevalent condition, the symptoms of which (urinary frequency and urgency, with or without urge incontinence) can exert a profound neg. effect on a person's daily life activities. Tolterodine (Detrol in North America and Detrusitol in the rest of the world, Pharmacia), a competitive muscarinic antagonist, is the first agent of this class to be specifically developed for the treatment of OAB. This agent displays in vivo functional selectivity for the bladder over other tissues that contain muscarinic receptors (e.g., salivary glands, eye), which translates into good efficacy and tolerability in patients with OAB (including the elderly). Comparative, randomized, double-blind studies show that tolterodine (administered as immediate-release [IR] tablets 2 mg b.i.d.) is as effective as oxybutynin (5 mg t.i.d.) in improving all of the troublesome symptoms of OAB but with a significantly lower incidence and severity of dry mouth. The advent of a new extended-release (ER) capsule formulation of tolterodine (4 mg) for convenient once-daily treatment builds upon these findings, with significantly improved efficacy for reducing urge incontinence episodes and a lower frequency of dry mouth relative to the existing IR tablet (2 mg b.i.d.). Tolterodine can therefore be considered a valuable, well-tolerated treatment option for patients with OAB, providing improvements in symptoms that are both clin. meaningful to patients and sustained during long-term treatment.
 IT 124937-52-6, Tolterodine tartrate
 RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (Detrol; efficacy and safety of tolterodine in treatment of overactive bladder in humans)
 RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)
 CM 1
 CRN 124937-51-5
 CMF C22 H31 N O

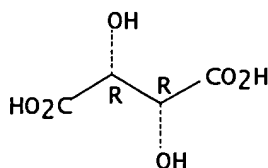
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.

RE.CNT 74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 74 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:460854 CAPLUS

DN 136:194075

TI A comparison of the effects on saliva output of oxybutynin chloride and tolterodine tartrate

AU Chancellor, Michael B.; Appell, Rodney A.; Sathyan, Gayatri; Gupta, Suneel K.

CS Department of Urology, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA

SO Clinical Therapeutics (2001), 23(5), 753-760

CODEN: CLTHDG; ISSN: 0149-2918

PB Excerpta Medica, Inc.

DT Journal

LA English

AB Oxybutynin chloride and tolterodine tartrate are anticholinergic agents used to suppress involuntary bladder contractions in urinary incontinence. They act by inhibiting binding of acetylcholine to the muscarinic receptors in the detrusor muscle of the bladder. The same types of muscarinic receptors are found in the salivary glands; thus anticholinergic agents may decrease saliva production and cause dry mouth, a commonly cited reason for discontinuation of therapy. The primary objective of this study was to compare saliva output, which is an objective measure of dry mouth, in subjects taking immediate- or extended-release oxybutynin, tolterodine, or placebo. This was a single-site, single-dose, randomized, double-blind, 4-treatment, 4-period crossover study. Subjects were randomly assigned to 1 of 4 treatment sequences that included extended-release oxybutynin 10 mg, tolterodine 2 mg, immediate-release oxybutynin 5 mg, and placebo. Saliva output was measured objectively before dosing with each treatment and at 0.5, 1, 2, 3, 4, 6, 8, 10, and 12 h after dosing. Thirty-six healthy adult volunteers (22 women and 14 men) participated in the study. They ranged in age from 19 to 42 yr (mean, 27 yr). Thirty-one were white, 3 Asian, and 2 black. There were no significant differences in predose saliva output between the 4 study groups. With placebo, saliva output increased throughout the day. Saliva output was maintained at predose levels throughout the day with extended-release oxybutynin. Two hours after dosing with tolterodine and immediate-release oxybutynin, saliva output decreased nearly 0.5 g in specimens collected over 2 min. All 3 active treatments were associated with lower saliva output compared with placebo. Extended-release oxybutynin and tolterodine were similar with respect to area under the saliva concentration-time curve but were associated with significantly greater saliva output than. Was immediate-release oxybutynin ($P < 0.01$). There were no serious adverse events (AEs) in this

study. AEs were similar between treatments, although the incidence of headache was higher in the active-treatment groups than with placebo. Objective assessment of saliva output in healthy adult volunteers indicated that extended-release oxybutynin and tolterodine had less impact on saliva output than did conventional immediate-release oxybutynin, suggesting that they may yield lower levels of dry mouth.

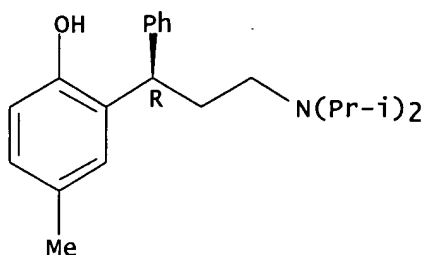
IT 124937-52-6, Tolterodine tartrate
 RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); BIOL (Biological study)
 (a comparison of the effects on saliva output of oxybutynin chloride and tolterodine tartrate)

RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5
 CMF C22 H31 N O

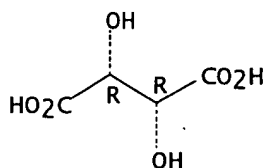
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 75 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:295441 CAPLUS

DN 135:205235

TI Prospective randomized controlled trial of extended-release oxybutynin chloride and tolterodine tartrate in the treatment of overactive bladder: results of the OBJECT study

AU Appell, Rodney A.; Sand, Peter; Dmochowski, Roger; Anderson, Rodney; Zinner, Norman; Lama, Daniel; Roach, Martha; Miklos, John; Saltzstein, Daniel; Boone, Timothy; Staskin, David R.; Albrecht, Detlef; Anderson,

Rodney; Antoci, Joseph; Appell, Rodney A.; Berger, Yitzhak; Bishop, Jay R., Jr.; Brown, Rodney; Childs, Stacy; Das, Anurag A.; Dennis, Rodney; Dmochowski, Roger; Dula, Eugene; Nuys, Van; Garely, Alan D.; Gittelman, Marc; Gottesman, James E.; Graham, Chester F.; Hagood, Paul G.; Harris, Richard; Karram, Mickey; Lama, Daniel J.; McMurray, James G.; Miklos, John; Munoz, David R.; Nehra, Ajay; Peters, Kenneth M.; Ritter, Henry; Roach, Martha; Saltzstein, Daniel; Sand, Peter; Sieber, Paul; Snyder, Jeffery; Spellberg, David; Tuttle, John; Staskin, David R.; Wainstein, Mark A.; White, Charles; Zinner, Norm

CS Cleveland Clinic Foundation, Cleveland, OH, USA

SO Mayo Clinic Proceedings (2001), 76(4), 358-363

CODEN: MACPAJ; ISSN: 0025-6196

PB Dowden Health Media, Inc.

DT Journal

LA English

AB Objective: To compare the efficacy and tolerability of extended-release oxybutynin chloride and tolterodine tartrate at 12 wk in participants with overactive bladder. Subjects and Methods: The OBJECT (Overactive Bladder: Judging Effective Control and Treatment) study was a prospective, randomized, double-blind, parallel-group study conducted between Mar. and Oct. 2000 at 37 US study sites. Participants who had between 7 and 50 episodes of urge incontinence per wk and 10 or more voids in 24 h received extended-release oxybutynin, 10 mg/d, or tolterodine, 2 mg twice daily. The outcome measures were the number of episodes of urge incontinence, total incontinence, and micturition frequency at 12 wk adjusted for baseline. Results: A total of 315 women and 63 men were randomized and treated, and 332 participants (276 women, 56 men) completed the study. At the end of the study, extended-release oxybutynin was significantly more effective than tolterodine in each of the main outcome measures: weekly urge incontinence ($P=.03$), total incontinence ($P=.02$), and micturition frequency episodes ($P=.02$) adjusted for baseline. Both drugs improved symptoms of overactive bladder significantly from baseline to the end of the study as assessed by the 3 main outcome measures ($P<.001$). Dry mouth, the most common adverse event, was reported by 28.1% and 33.2% of participants taking extended-release oxybutynin and tolterodine, resp. ($P=.32$). Rates of central nervous system and other adverse events were low and similar in both groups. Conclusions: Extended-release oxybutynin was more effective than tolterodine as measured by end-of-study urge incontinence, total incontinence, and micturition frequency episodes. Both groups had similar rates of dry mouth and other adverse events.

IT 124937-52-6, Tolterodine tartrate

RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(oxybutynin chloride and tolterodine tartrate prospective randomized controlled trial in treatment of overactive bladder in humans)

RN 124937-52-6 CAPLUS

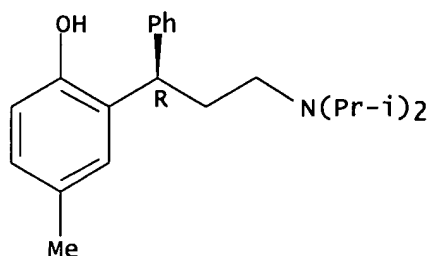
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

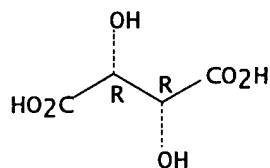
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 76 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2000:335217 CAPLUS
 DN 132:339373
 TI New controlled release bead, a method of producing the same and multiple unit formulation comprising it
 IN Gren, Torkel; Ringberg, Anders; Wikberg, Martin; Wald, Randy J.
 PA Pharmacia & Upjohn AB, Swed.
 SO PCT Int. Appl., 26 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 5

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2000027364 | A1 | 20000518 | WO 1999-SE2052 | 19991111 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| WO 2000012069 | A1 | 20000309 | WO 1999-SE1463 | 19990826 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |

| | | | |
|---|----|----------|---------------------------|
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, | | | |
| ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, | | | |
| CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | |
| CA 2350061 | AA | 20000518 | SE 1998-2864 A 19980827 |
| CA 2350061 | C | 20050517 | SE 1998-3871 A 19981111 |
| | | | CA 1999-2350061 19991111 |
| | | | SE 1998-3871 A 19981111 |
| | | | WO 1999-SE1463 A 19990826 |
| | | | WO 1999-SE2052 W 19991111 |
| AU 2000014366 | A5 | 20000529 | AU 2000-14366 19991111 |
| AU 762410 | B2 | 20030626 | |
| | | | SE 1998-3871 A 19981111 |
| | | | WO 1999-SE1463 A 19990826 |
| | | | WO 1999-SE2052 W 19991111 |
| BR 9915142 | A | 20010807 | BR 1999-15142 19991111 |
| | | | SE 1998-3871 A 19981111 |
| | | | WO 1999-SE1463 A 19990826 |
| | | | WO 1999-SE2052 W 19991111 |
| EP 1128819 | A1 | 20010905 | EP 1999-971702 19991111 |
| EP 1128819 | B1 | 20030820 | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, | | | |
| IE, SI, LT, LV, FI, RO | | | |
| | | | SE 1998-3871 A 19981111 |
| | | | WO 1999-SE1463 W 19990826 |
| | | | WO 1999-SE2052 W 19991111 |
| EE 200100254 | A | 20021216 | EE 2001-254 19991111 |
| | | | SE 1998-3871 A 19981111 |
| | | | WO 1999-SE1463 A 19990826 |
| | | | WO 1999-SE2052 W 19991111 |
| JP 2003517446 | T2 | 20030527 | JP 2000-580595 19991111 |
| JP 3616011 | B2 | 20050202 | |
| | | | SE 1998-3871 A 19981111 |
| | | | WO 1999-SE1463 A 19990826 |
| | | | WO 1999-SE2052 W 19991111 |
| NZ 511430 | A | 20030530 | NZ 1999-511430 19991111 |
| | | | SE 1998-3871 A 19981111 |
| | | | WO 1999-SE1463 W 19990826 |
| | | | WO 1999-SE2052 W 19991111 |
| AT 247458 | E | 20030915 | AT 1999-971702 19991111 |
| | | | SE 1998-3871 A 19981111 |
| | | | WO 1999-SE1463 W 19990826 |
| | | | WO 1999-SE2052 W 19991111 |
| US 6911217 | B1 | 20050628 | US 2001-763281 19991111 |
| | | | SE 1998-3871 A 19981111 |
| | | | WO 1999-SE1463 A 19990826 |
| | | | WO 1999-SE2052 W 19991111 |
| SK 284758 | B6 | 20051103 | SK 2001-625 19991111 |
| | | | SE 1998-3871 A 19981111 |
| | | | WO 1999-SE1463 A 19990826 |
| | | | WO 1999-SE2052 A 19991111 |
| TW 222879 | B1 | 20041101 | TW 2000-89102338 20000211 |
| | | | SE 1998-3871 A 19981111 |
| CA 2387973 | AA | 20010517 | CA 2000-2387973 20001024 |
| | | | WO 1999-SE2052 A 19991111 |
| | | | SE 2000-782 A 20000309 |
| | | | WO 2000-SE2061 W 20001024 |
| WO 2001034139 | A1 | 20010517 | WO 2000-SE2061 20001024 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, | | | |
| CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, | | | |
| IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, | | | |

| | | | | |
|---|----|----------|-----------------|--|
| | | | | MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW |
| RW: | | | | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG |
| AU 2001013192 | A5 | 20010606 | WO 1999-SE2052 | A 19991111 |
| AU 784104 | B2 | 20060202 | SE 2000-782 | A 20000309 |
| | | | AU 2001-13192 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| BR 2000015346 | A | 20020625 | BR 2000-15346 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| EP 1227806 | A1 | 20020807 | EP 2000-975092 | 20001024 |
| EP 1227806 | B1 | 20050803 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | | | |
| | | | WO 1999-SE2052 | W 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| HU 200203028 | A2 | 20030228 | HU 2002-3028 | 20001024 |
| | | | WO 1999-SE2052 | W 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| JP 2003513918 | T2 | 20030415 | JP 2001-536139 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| NZ 518309 | A | 20030530 | NZ 2000-518309 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| EE 200200245 | A | 20030616 | EE 2002-245 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| AT 300941 | E | 20050815 | AT 2000-975092 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| PT 1227806 | T | 20051031 | PT 2000-975092 | 20001024 |
| | | | WO 1999-SE2052 | W 19991111 |
| | | | SE 2000-782 | A 20000309 |
| ES 2245320 | T3 | 20060101 | ES 2000-975092 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| US 6630162 | B1 | 20031007 | US 2000-708428 | 20001109 |
| | | | WO 1999-SE2052 | A2 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | US 2000-202862P | P 20000510 |
| ZA 2001003575 | A | 20020503 | ZA 2001-3575 | 20010503 |
| | | | SE 1998-3871 | A 19981111 |
| NO 2001002314 | A | 20010709 | NO 2001-2314 | 20010510 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| HR 2001000333 | A1 | 20030430 | HR 2001-333 | 20010510 |
| HR 20010333 | B1 | 20041031 | | |

| | | | | | |
|---------------|----|----------|----------------|---|----------|
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| BG 105582 | A | 20011231 | WO 1999-SE2052 | W | 19991111 |
| | | | BG 2001-105582 | | 20010608 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| HK 1040917 | A1 | 20050527 | WO 1999-SE2052 | W | 19991111 |
| | | | HK 2002-102521 | | 20020404 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| ZA 2002002767 | A | 20030409 | WO 1999-SE2052 | A | 19991111 |
| | | | ZA 2002-2767 | | 20020409 |
| NO 2002002264 | A | 20020513 | WO 1999-SE2052 | A | 19991111 |
| | | | NO 2002-2264 | | 20020513 |
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |

PATENT FAMILY INFORMATION:

FAN 2000:161114

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--------------|---|----------|-------------------|-----------------|------------|
| PI | WO 2000012069 | A1 | 20000309 | WO 1999-SE1463 | 19990826 |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | SE 1998-2864 | A 19980827 |
| | | | | SE 1998-3871 | A 19981111 |
| CA 2311755 | AA | 20000309 | CA 1999-2311755 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| AU 9958918 | A1 | 20000321 | WO 1999-SE1463 | W | 19990826 |
| AU 745190 | B2 | 20020314 | AU 1999-58918 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| EP 1039882 | A1 | 20001004 | EP 1999-946521 | | 19990826 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| TR 200001998 | T1 | 20010122 | WO 1999-SE1463 | W | 19990826 |
| | | | TR 2000-200001998 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| HU 200100437 | A2 | 20020529 | HU 2001-437 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| NZ 504618 | A | 20020927 | NZ 1999-504618 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| IL 136294 | A1 | 20040208 | IL 1999-136294 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |

| | | | | |
|---|----|----------|-----------------|------------|
| CA 2350061 | AA | 20000518 | CA 1999-2350061 | 19991111 |
| CA 2350061 | C | 20050517 | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| WO 2000027364 | A1 | 20000518 | WO 1999-SE2052 | 19991111 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, | | | | |
| CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, | | | | |
| IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, | | | | |
| MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, | | | | |
| SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, | | | | |
| DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, | | | | |
| CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| AU 2000014366 | A5 | 20000529 | AU 2000-14366 | 19991111 |
| AU 762410 | B2 | 20030626 | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| BR 9915142 | A | 20010807 | BR 1999-15142 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| EP 1128819 | A1 | 20010905 | EP 1999-971702 | 19991111 |
| EP 1128819 | B1 | 20030820 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, | | | | |
| IE, SI, LT, LV, FI, RO | | | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| HU 200105038 | A2 | 20020629 | HU 2001-5038 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| EE 200100254 | A | 20021216 | EE 2001-254 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| JP 2003517446 | T2 | 20030527 | JP 2000-580595 | 19991111 |
| JP 3616011 | B2 | 20050202 | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| NZ 511430 | A | 20030530 | NZ 1999-511430 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| AT 247458 | E | 20030915 | AT 1999-971702 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| PT 1128819 | T | 20031231 | PT 1999-971702 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| ES 2204193 | T3 | 20040416 | ES 1999-971702 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| US 6911217 | B1 | 20050628 | US 2001-763281 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |

| | | | | | |
|---|------|----------|------------------|----------|----------|
| SK 284758 | B6 | 20051103 | WO 1999-SE2052 | W | 19991111 |
| | | | SK 2001-625 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| TW 222879 | B1 | 20041101 | WO 1999-SE2052 | A | 19991111 |
| | | | TW 2000-89102338 | | 20000211 |
| | | | SE 1998-3871 | A | 19981111 |
| BG 104476 | A | 20001229 | BG 2000-104476 | | 20000526 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| NO 2000002977 | A | 20000609 | WO 1999-SE1463 | W | 19990826 |
| | | | NO 2000-2977 | | 20000609 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3864 | A | 19981111 |
| US 6770295 | B1 | 20040803 | WO 1999-SE1463 | W | 19990826 |
| | | | US 2000-582498 | | 20000809 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| ZA 2001003575 | A | 20020503 | WO 1999-SE1463 | W | 19990826 |
| | | | ZA 2001-3575 | | 20010503 |
| | | | SE 1998-3871 | A | 19981111 |
| NO 2001002314 | A | 20010709 | NO 2001-2314 | | 20010510 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| HR 2001000333 | A1 | 20030430 | WO 1999-SE2052 | W | 19991111 |
| HR 20010333 | B1 | 20041031 | HR 2001-333 | | 20010510 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| BG 105582 | A | 20011231 | WO 1999-SE2052 | W | 19991111 |
| | | | BG 2001-105582 | | 20010608 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| HK 1034664 | A1 | 20060908 | WO 1999-SE2052 | W | 19991111 |
| | | | HK 2001-104868 | | 20010712 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| HK 1040917 | A1 | 20050527 | HK 2002-102521 | | 20020404 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | A | 19991111 |
| FAN 2000:161115 | | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
| PI WO 2000012070 | A1 | 20000309 | WO 1999-SE1464 | 19990826 | |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, | | | | | |
| CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, | | | | | |
| IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, | | | | | |
| MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, | | | | | |
| SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, | | | | | |
| ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, | | | | | |
| CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | | |
| CA 2341063 | AA | 20000309 | SE 1998-2864 | A | 19980827 |
| | | | CA 1999-2341063 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | WO 1999-SE1464 | W | 19990826 |
| AU 9958919 | A1 | 20000321 | AU 1999-58919 | | 19990826 |
| AU 758399 | B2 | 20030320 | | | |
| | | | SE 1998-2864 | A | 19980827 |

| | | | | | |
|---|-------|----------|-----------------|-------|----------|
| EP 1105111 | A1 | 20010613 | WO 1999-SE1464 | W | 19990826 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | EP 1999-946522 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| JP 2002523446 | T2 | 20020730 | WO 1999-SE1464 | W | 19990826 |
| | | | JP 2000-567189 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| NZ 509928 | A | 20030829 | WO 1999-SE1464 | W | 19990826 |
| | | | NZ 1999-509928 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| ZA 2000002488 | A | 20010516 | WO 1999-SE1464 | W | 19990826 |
| | | | ZA 2000-2488 | | 20000519 |
| | | | SE 1998-2864 | A | 19980827 |
| US 6517864 | B1 | 20030211 | US 2001-763654 | | 20010430 |
| | | | SE 1998-2864 | A | 19980827 |
| US 2003124179 | A1 | 20030703 | WO 1999-SE1464 | W | 19990826 |
| US 7008637 | B2 | 20060307 | US 2002-301719 | | 20021122 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | WO 1999-SE1464 | W | 19990826 |
| | | | US 2001-763654 | A1 | 20010430 |
| FAN 2001:359788 | | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
| ----- | ----- | ----- | ----- | ----- | |
| PI WO 2001034139 | A1 | 20010517 | WO 2000-SE2061 | | 20001024 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | | |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| WO 2000027364 | A1 | 20000518 | WO 1999-SE2052 | | 19991111 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | | |
| | | | SE 1998-3871 | A | 19981111 |
| CA 2387973 | AA | 20010517 | WO 1999-SE1463 | W | 19990826 |
| | | | CA 2000-2387973 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| AU 2001013192 | A5 | 20010606 | AU 2001-13192 | | 20001024 |
| AU 784104 | B2 | 20060202 | | | |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| BR 2000015346 | A | 20020625 | BR 2000-15346 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| EP 1227806 | A1 | 20020807 | EP 2000-975092 | | 20001024 |

| | | | | |
|---|----|----------|----------------|------------|
| EP 1227806 | B1 | 20050803 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | | | |
| | | | WO 1999-SE2052 | W 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| HU 200203028 | A2 | 20030228 | HU 2002-3028 | 20001024 |
| | | | WO 1999-SE2052 | W 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| JP 2003513918 | T2 | 20030415 | JP 2001-536139 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| NZ 518309 | A | 20030530 | NZ 2000-518309 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| EE 200200245 | A | 20030616 | EE 2002-245 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| AT 300941 | E | 20050815 | AT 2000-975092 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| NO 2002002264 | A | 20020513 | NO 2002-2264 | 20020513 |
| | | | WO 1999-SE2052 | W 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |

| | | | | |
|---|-------------|----------|----------|-----------------|
| FAN | 2003:784592 | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. |
| | ----- | ---- | ----- | ----- |
| PI | US 6630162 | B1 | 20031007 | US 2000-708428 |
| | | | | WO 1999-SE2052 |
| | | | | SE 2000-782 |
| | | | | US 2000-202862P |
| | | | | WO 1999-SE2052 |
| | | | | 19991111 |
| WO 2000027364 | A1 | 20000518 | | |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | SE 1998-3871 |
| | | | | WO 1999-SE1463 |
| | | | | A 19981111 |
| | | | | W 19990826 |

| | |
|----|---|
| OS | MARPAT 132:339373 |
| AB | A controlled release bead comprises: (i) a core unit of a substantially water-soluble or water-swellaable inert material; (ii) a first layer on the core unit of a substantially water-insol. polymer; (iii) a second layer covering the first layer and containing an active ingredient; and (iv) a third layer of polymer on the second layer effective for controlled release of the active ingredient, wherein the first layer is adapted to control water penetration into the core. A method of producing the controlled release bead is also disclosed. A bead was prepared comprising a core of starch-cong. sugar sphere, a 1st layer containing Surelease, and 2nd layer containing tolterodine L-tartrate and HPMC, and a 3rd layer containing Surelease/HPMC. |
| IT | 124937-52-6, Tolterodine tartrate |

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(controlled release bead and multiple unit formulation containing it)

RN 124937-52-6 CAPLUS

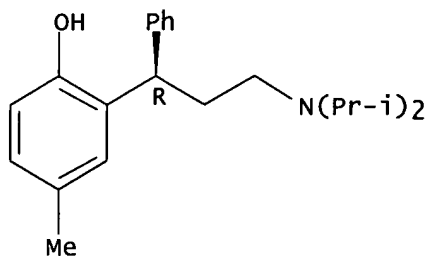
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
(2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

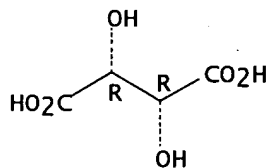


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 77 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:161115 CAPLUS

DN 132:212694

TI Transdermally administered tolterodine as anti-muscarinic agent for the treatment of overactive bladder

IN Orup, Jacobsen Lene; Kreilgard, Bo; Hoeck, Ulla; Kristensen, Helle

PA Pharmacia & Upjohn Ab, Swed.; Orup Jacobsen, Lene

SO PCT Int. Appl., 76 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 5

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|----------|
| PI | WO 2000012070 | A1 | 20000309 | WO 1999-SE1464 | 19990826 |
| | W: | | | | |
| | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, | | | | |
| | CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, | | | | |
| | IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, | | | | |

MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
 SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
 ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
 CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

| | | | | | |
|--|----|----------|-----------------|----|----------|
| CA 2341063 | AA | 20000309 | SE 1998-2864 | A | 19980827 |
| | | | CA 1999-2341063 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | WO 1999-SE1464 | W | 19990826 |
| AU 9958919 | A1 | 20000321 | AU 1999-58919 | | 19990826 |
| AU 758399 | B2 | 20030320 | | | |
| | | | SE 1998-2864 | A | 19980827 |
| | | | WO 1999-SE1464 | W | 19990826 |
| EP 1105111 | A1 | 20010613 | EP 1999-946522 | | 19990826 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | | |
| | | | SE 1998-2864 | A | 19980827 |
| | | | WO 1999-SE1464 | W | 19990826 |
| JP 2002523446 | T2 | 20020730 | JP 2000-567189 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | WO 1999-SE1464 | W | 19990826 |
| NZ 509928 | A | 20030829 | NZ 1999-509928 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | WO 1999-SE1464 | W | 19990826 |
| ZA 2000002488 | A | 20010516 | ZA 2000-2488 | | 20000519 |
| | | | SE 1998-2864 | A | 19980827 |
| US 6517864 | B1 | 20030211 | US 2001-763654 | | 20010430 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | WO 1999-SE1464 | W | 19990826 |
| US 2003124179 | A1 | 20030703 | US 2002-301719 | | 20021122 |
| US 7008637 | B2 | 20060307 | | | |
| | | | SE 1998-2864 | A | 19980827 |
| | | | WO 1999-SE1464 | W | 19990826 |
| | | | US 2001-763654 | A1 | 20010430 |

PATENT FAMILY INFORMATION:

FAN 2000:161114

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|---|----------|-----------------|-----------------|------------|
| PI | WO 2000012069 | A1 | 20000309 | WO 1999-SE1463 | 19990826 |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | SE 1998-2864 | A 19980827 |
| | | | | SE 1998-3871 | A 19981111 |
| CA 2311755 | AA | 20000309 | CA 1999-2311755 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| AU 9958918 | A1 | 20000321 | AU 1999-58918 | | 19990826 |
| AU 745190 | B2 | 20020314 | | | |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| EP 1039882 | A1 | 20001004 | EP 1999-946521 | | 19990826 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | | |

| | | | | | |
|---------------|--|----------|-------------------|---|----------|
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| TR 200001998 | T1 | 20010122 | TR 2000-200001998 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| HU 200100437 | A2 | 20020529 | HU 2001-437 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| NZ 504618 | A | 20020927 | NZ 1999-504618 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| IL 136294 | A1 | 20040208 | IL 1999-136294 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| CA 2350061 | AA | 20000518 | WO 1999-SE1463 | W | 19990826 |
| CA 2350061 | C | 20050517 | CA 1999-2350061 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| WO 2000027364 | A1 | 20000518 | WO 1999-SE2052 | | 19991111 |
| W: | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: | GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| AU 2000014366 | A5 | 20000529 | AU 2000-14366 | | 19991111 |
| AU 762410 | B2 | 20030626 | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| BR 9915142 | A | 20010807 | BR 1999-15142 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| EP 1128819 | A1 | 20010905 | EP 1999-971702 | | 19991111 |
| EP 1128819 | B1 | 20030820 | | | |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| HU 200105038 | A2 | 20020629 | HU 2001-5038 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| EE 200100254 | A | 20021216 | EE 2001-254 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| JP 2003517446 | T2 | 20030527 | JP 2000-580595 | | 19991111 |
| JP 3616011 | B2 | 20050202 | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |

| | | | | |
|-----------------|------|----------|------------------|------------|
| NZ 511430 | A | 20030530 | NZ 1999-511430 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| AT 247458 | E | 20030915 | WO 1999-SE2052 | W 19991111 |
| | | | AT 1999-971702 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| PT 1128819 | T | 20031231 | PT 1999-971702 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| ES 2204193 | T3 | 20040416 | ES 1999-971702 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| US 6911217 | B1 | 20050628 | US 2001-763281 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| SK 284758 | B6 | 20051103 | SK 2001-625 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | A 19991111 |
| TW 222879 | B1 | 20041101 | TW 2000-89102338 | 20000211 |
| | | | SE 1998-3871 | A 19981111 |
| BG 104476 | A | 20001229 | BG 2000-104476 | 20000526 |
| | | | SE 1998-2864 | A 19980827 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| NO 2000002977 | A | 20000609 | NO 2000-2977 | 20000609 |
| | | | SE 1998-2864 | A 19980827 |
| | | | SE 1998-3864 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| US 6770295 | B1 | 20040803 | US 2000-582498 | 20000809 |
| | | | SE 1998-2864 | A 19980827 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| ZA 2001003575 | A | 20020503 | ZA 2001-3575 | 20010503 |
| | | | SE 1998-3871 | A 19981111 |
| NO 2001002314 | A | 20010709 | NO 2001-2314 | 20010510 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| HR 2001000333 | A1 | 20030430 | HR 2001-333 | 20010510 |
| HR 20010333 | B1 | 20041031 | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| BG 105582 | A | 20011231 | BG 2001-105582 | 20010608 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| HK 1034664 | A1 | 20060908 | HK 2001-104868 | 20010712 |
| | | | SE 1998-2864 | A 19980827 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| HK 1040917 | A1 | 20050527 | HK 2002-102521 | 20020404 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | A 19991111 |
| FAN 2000:335217 | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |

| | | | | | |
|----|---|----|----------|-----------------|------------|
| PI | WO 2000027364 | A1 | 20000518 | WO 1999-SE2052 | 19991111 |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | SE 1998-3871 | A 19981111 |
| | | | | WO 1999-SE1463 | W 19990826 |
| | | | | WO 1999-SE1463 | 19990826 |
| | WO 2000012069 | A1 | 20000309 | | |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | SE 1998-2864 | A 19980827 |
| | | | | SE 1998-3871 | A 19981111 |
| | CA 2350061 | AA | 20000518 | CA 1999-2350061 | 19991111 |
| | CA 2350061 | C | 20050517 | | |
| | | | | SE 1998-3871 | A 19981111 |
| | | | | WO 1999-SE1463 | A 19990826 |
| | | | | WO 1999-SE2052 | W 19991111 |
| | AU 2000014366 | A5 | 20000529 | AU 2000-14366 | 19991111 |
| | AU 762410 | B2 | 20030626 | | |
| | | | | SE 1998-3871 | A 19981111 |
| | | | | WO 1999-SE1463 | A 19990826 |
| | | | | WO 1999-SE2052 | W 19991111 |
| | BR 9915142 | A | 20010807 | BR 1999-15142 | 19991111 |
| | | | | SE 1998-3871 | A 19981111 |
| | | | | WO 1999-SE1463 | A 19990826 |
| | | | | WO 1999-SE2052 | W 19991111 |
| | EP 1128819 | A1 | 20010905 | EP 1999-971702 | 19991111 |
| | EP 1128819 | B1 | 20030820 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | | | | SE 1998-3871 | A 19981111 |
| | | | | WO 1999-SE1463 | W 19990826 |
| | | | | WO 1999-SE2052 | W 19991111 |
| | EE 200100254 | A | 20021216 | EE 2001-254 | 19991111 |
| | | | | SE 1998-3871 | A 19981111 |
| | | | | WO 1999-SE1463 | A 19990826 |
| | | | | WO 1999-SE2052 | W 19991111 |
| | JP 2003517446 | T2 | 20030527 | JP 2000-580595 | 19991111 |
| | JP 3616011 | B2 | 20050202 | | |
| | | | | SE 1998-3871 | A 19981111 |
| | | | | WO 1999-SE1463 | A 19990826 |
| | | | | WO 1999-SE2052 | W 19991111 |
| | NZ 511430 | A | 20030530 | NZ 1999-511430 | 19991111 |
| | | | | SE 1998-3871 | A 19981111 |
| | | | | WO 1999-SE1463 | W 19990826 |
| | | | | WO 1999-SE2052 | W 19991111 |
| | AT 247458 | E | 20030915 | AT 1999-971702 | 19991111 |
| | | | | SE 1998-3871 | A 19981111 |
| | | | | WO 1999-SE1463 | W 19990826 |
| | | | | WO 1999-SE2052 | W 19991111 |

| | | | | | |
|---|----|----------|------------------|---|----------|
| US 6911217 | B1 | 20050628 | US 2001-763281 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| SK 284758 | B6 | 20051103 | WO 1999-SE2052 | W | 19991111 |
| | | | SK 2001-625 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | A | 19991111 |
| TW 222879 | B1 | 20041101 | TW 2000-89102338 | | 20000211 |
| | | | SE 1998-3871 | A | 19981111 |
| CA 2387973 | AA | 20010517 | CA 2000-2387973 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| WO 2001034139 | A1 | 20010517 | WO 2000-SE2061 | | 20001024 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | | |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| AU 2001013192 | A5 | 20010606 | AU 2001-13192 | | 20001024 |
| AU 784104 | B2 | 20060202 | | | |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| BR 2000015346 | A | 20020625 | BR 2000-15346 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| EP 1227806 | A1 | 20020807 | EP 2000-975092 | | 20001024 |
| EP 1227806 | B1 | 20050803 | | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | | | | |
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| HU 200203028 | A2 | 20030228 | HU 2002-3028 | | 20001024 |
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| JP 2003513918 | T2 | 20030415 | JP 2001-536139 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| NZ 518309 | A | 20030530 | NZ 2000-518309 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| EE 200200245 | A | 20030616 | EE 2002-245 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| AT 300941 | E | 20050815 | AT 2000-975092 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |

| | | | | |
|---|------|----------|-----------------|-------------|
| PT 1227806 | T | 20051031 | PT 2000-975092 | 20001024 |
| | | | WO 1999-SE2052 | W 19991111 |
| ES 2245320 | T3 | 20060101 | SE 2000-782 | A 20000309 |
| | | | ES 2000-975092 | 20001024 |
| US 6630162 | B1 | 20031007 | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | US 2000-708428 | 20001109 |
| | | | WO 1999-SE2052 | A2 19991111 |
| | | | SE 2000-782 | A 20000309 |
| ZA 2001003575 | A | 20020503 | US 2000-202862P | P 20000510 |
| NO 2001002314 | A | 20010709 | ZA 2001-3575 | 20010503 |
| | | | SE 1998-3871 | A 19981111 |
| | | | NO 2001-2314 | 20010510 |
| | | | SE 1998-3871 | A 19981111 |
| HR 2001000333 | A1 | 20030430 | WO 1999-SE1463 | W 19990826 |
| HR 20010333 | B1 | 20041031 | WO 1999-SE2052 | W 19991111 |
| | | | HR 2001-333 | 20010510 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| BG 105582 | A | 20011231 | BG 2001-105582 | 20010608 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| HK 1040917 | A1 | 20050527 | HK 2002-102521 | 20020404 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | A 19991111 |
| ZA 2002002767 | A | 20030409 | ZA 2002-2767 | 20020409 |
| NO 2002002264 | A | 20020513 | WO 1999-SE2052 | A 19991111 |
| | | | NO 2002-2264 | 20020513 |
| | | | WO 1999-SE2052 | W 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| FAN 2001:359788 | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| PI WO 2001034139 | A1 | 20010517 | WO 2000-SE2061 | 20001024 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, | | | | |
| CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, | | | | |
| IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, | | | | |
| MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, | | | | |
| SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, | | | | |
| DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, | | | | |
| CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| WO 2000027364 | A1 | 20000518 | WO 1999-SE2052 | 19991111 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, | | | | |
| CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, | | | | |
| IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, | | | | |
| MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, | | | | |
| SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, | | | | |
| DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, | | | | |
| CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| CA 2387973 | AA | 20010517 | CA 2000-2387973 | 20001024 |

| | | | | | |
|---|------|----------|-----------------|-------|----------|
| AU 2001013192 | A5 | 20010606 | WO 1999-SE2052 | A | 19991111 |
| AU 784104 | B2 | 20060202 | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| | | | AU 2001-13192 | | 20001024 |
| BR 2000015346 | A | 20020625 | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| | | | BR 2000-15346 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| EP 1227806 | A1 | 20020807 | EP 2000-975092 | | 20001024 |
| EP 1227806 | B1 | 20050803 | | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | | | | |
| HU 200203028 | A2 | 20030228 | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| | | | HU 2002-3028 | | 20001024 |
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| JP 2003513918 | T2 | 20030415 | JP 2001-536139 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| NZ 518309 | A | 20030530 | NZ 2000-518309 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| EE 200200245 | A | 20030616 | EE 2002-245 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| AT 300941 | E | 20050815 | AT 2000-975092 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| NO 2002002264 | A | 20020513 | NO 2002-2264 | | 20020513 |
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| FAN 2003:784592 | | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
| ----- | ---- | ----- | ----- | ----- | |
| PI US 6630162 | B1 | 20031007 | US 2000-708428 | | 20001109 |
| | | | WO 1999-SE2052 | A2 | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | US 2000-202862P | P | 20000510 |
| WO 2000027364 | A1 | 20000518 | WO 1999-SE2052 | | 19991111 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |

AB A device for transdermal administration of tolterodine, optionally encompassing salts, prodrugs and metabolites thereof, optionally together with pharmaceutically acceptable carrier(s) to a human being or an animal in order to achieve an effect against overactive bladder is described. Examples are given for tolterodine permeation across membranes, dissoln. from drug-in-adhesive acrylates, and formulation of transdermal systems.

IT 124937-52-6

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(transdermal tolterodine as antimuscarinic agent for treatment of overactive bladder)

RN 124937-52-6 CAPLUS

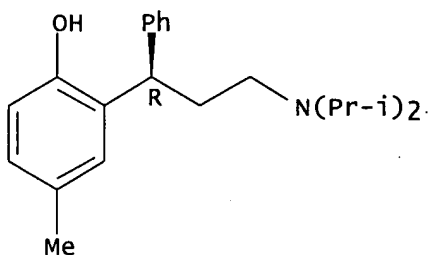
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

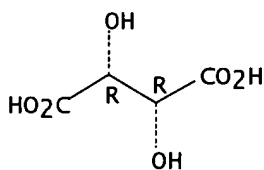


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 78 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:161114 CAPLUS

DN 132:212693

TI Therapeutic formulation for administering tolterodine with controlled release

IN Nilvebrant, Lisbeth; Hallen, Bengt; Olsson, Birgitta; Strombom, Jan; Kreilgard, Bo; Orup, Jacobsen Lene; Hoeck, Ulla; Kristensen, Helle; Gren, Torkel; Ringberg, Anders; Wikberg, Martin

PA Pharmacia & Upjohn Ab, Swed.; Orup Jacobsen, Lene; et al.
 SO PCT Int. Appl., 30 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 5

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-------------------|------------|
| PI WO 2000012069 | A1 | 20000309 | WO 1999-SE1463 | 19990826 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | SE 1998-2864 | A 19980827 |
| | | | SE 1998-3871 | A 19981111 |
| CA 2311755 | AA | 20000309 | CA 1999-2311755 | 19990826 |
| | | | SE 1998-2864 | A 19980827 |
| | | | SE 1998-3871 | A 19981111 |
| AU 9958918 | A1 | 20000321 | WO 1999-SE1463 | W 19990826 |
| AU 745190 | B2 | 20020314 | AU 1999-58918 | 19990826 |
| | | | SE 1998-2864 | A 19980827 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| EP 1039882 | A1 | 20001004 | EP 1999-946521 | 19990826 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | | | SE 1998-2864 | A 19980827 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| TR 200001998 | T1 | 20010122 | TR 2000-200001998 | 19990826 |
| | | | SE 1998-2864 | A 19980827 |
| | | | SE 1998-3871 | A 19981111 |
| HU 200100437 | A2 | 20020529 | HU 2001-437 | 19990826 |
| | | | SE 1998-2864 | A 19980827 |
| | | | SE 1998-3871 | A 19981111 |
| NZ 504618 | A | 20020927 | NZ 1999-504618 | 19990826 |
| | | | SE 1998-2864 | A 19980827 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| IL 136294 | A1 | 20040208 | IL 1999-136294 | 19990826 |
| | | | SE 1998-2864 | A 19980827 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| CA 2350061 | AA | 20000518 | CA 1999-2350061 | 19991111 |
| CA 2350061 | C | 20050517 | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| WO 2000027364 | A1 | 20000518 | WO 1999-SE2052 | 19991111 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, | | | | |

| CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
|---|----|----------|------------------|------------|
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| AU 2000014366 | A5 | 20000529 | AU 2000-14366 | 19991111 |
| AU 762410 | B2 | 20030626 | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| BR 9915142 | A | 20010807 | BR 1999-15142 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| EP 1128819 | A1 | 20010905 | EP 1999-971702 | 19991111 |
| EP 1128819 | B1 | 20030820 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| HU 200105038 | A2 | 20020629 | HU 2001-5038 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| EE 200100254 | A | 20021216 | EE 2001-254 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| JP 2003517446 | T2 | 20030527 | JP 2000-580595 | 19991111 |
| JP 3616011 | B2 | 20050202 | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| NZ 511430 | A | 20030530 | NZ 1999-511430 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| AT 247458 | E | 20030915 | AT 1999-971702 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| PT 1128819 | T | 20031231 | PT 1999-971702 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| ES 2204193 | T3 | 20040416 | ES 1999-971702 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| US 6911217 | B1 | 20050628 | US 2001-763281 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| SK 284758 | B6 | 20051103 | SK 2001-625 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | A 19991111 |
| TW 222879 | B1 | 20041101 | TW 2000-89102338 | 20000211 |
| | | | SE 1998-3871 | A 19981111 |
| BG 104476 | A | 20001229 | BG 2000-104476 | 20000526 |
| | | | SE 1998-2864 | A 19980827 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| NO 2000002977 | A | 20000609 | NO 2000-2977 | 20000609 |
| | | | SE 1998-2864 | A 19980827 |

| | | | | | |
|---------------|----|----------|----------------|---|----------|
| US 6770295 | B1 | 20040803 | SE 1998-3864 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | US 2000-582498 | | 20000809 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| ZA 2001003575 | A | 20020503 | ZA 2001-3575 | | 20010503 |
| | | | SE 1998-3871 | A | 19981111 |
| NO 2001002314 | A | 20010709 | NO 2001-2314 | | 20010510 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| HR 2001000333 | A1 | 20030430 | HR 2001-333 | | 20010510 |
| HR 20010333 | B1 | 20041031 | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| BG 105582 | A | 20011231 | BG 2001-105582 | | 20010608 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| HK 1034664 | A1 | 20060908 | HK 2001-104868 | | 20010712 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| HK 1040917 | A1 | 20050527 | HK 2002-102521 | | 20020404 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | A | 19991111 |

PATENT FAMILY INFORMATION:

FAN 2000:161115

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|------------|
| PI | WO 2000012070 | A1 | 20000309 | WO 1999-SE1464 | 19990826 |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | CA 2341063 | AA | 20000309 | SE 1998-2864 | A 19980827 |
| | | | | CA 1999-2341063 | 19990826 |
| | | | | SE 1998-2864 | A 19980827 |
| | | | | WO 1999-SE1464 | W 19990826 |
| | AU 9958919 | A1 | 20000321 | AU 1999-58919 | 19990826 |
| | AU 758399 | B2 | 20030320 | | |
| | | | | SE 1998-2864 | A 19980827 |
| | | | | WO 1999-SE1464 | W 19990826 |
| | EP 1105111 | A1 | 20010613 | EP 1999-946522 | 19990826 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | | | | SE 1998-2864 | A 19980827 |
| | | | | WO 1999-SE1464 | W 19990826 |
| | JP 2002523446 | T2 | 20020730 | JP 2000-567189 | 19990826 |
| | | | | SE 1998-2864 | A 19980827 |
| | | | | WO 1999-SE1464 | W 19990826 |
| | NZ 509928 | A | 20030829 | NZ 1999-509928 | 19990826 |
| | | | | SE 1998-2864 | A 19980827 |
| | | | | WO 1999-SE1464 | W 19990826 |

| | | | | |
|---|-------|----------|-----------------|-------------|
| ZA 2000002488 | A | 20010516 | ZA 2000-2488 | 20000519 |
| US 6517864 | B1 | 20030211 | SE 1998-2864 | A 19980827 |
| | | | US 2001-763654 | 20010430 |
| | | | SE 1998-2864 | A 19980827 |
| US 2003124179 | A1 | 20030703 | WO 1999-SE1464 | W 19990826 |
| US 7008637 | B2 | 20060307 | US 2002-301719 | 20021122 |
| | | | SE 1998-2864 | A 19980827 |
| | | | WO 1999-SE1464 | W 19990826 |
| | | | US 2001-763654 | A1 20010430 |
| FAN 2000:335217 | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| ----- | ----- | ----- | ----- | ----- |
| PI WO 2000027364 | A1 | 20000518 | WO 1999-SE2052 | 19991111 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, | | | | |
| CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, | | | | |
| IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, | | | | |
| MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, | | | | |
| SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, | | | | |
| DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, | | | | |
| CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| WO 2000012069 | A1 | 20000309 | WO 1999-SE1463 | 19990826 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, | | | | |
| CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, | | | | |
| IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, | | | | |
| MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, | | | | |
| SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, | | | | |
| ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, | | | | |
| CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | SE 1998-2864 | A 19980827 |
| CA 2350061 | AA | 20000518 | SE 1998-3871 | A 19981111 |
| CA 2350061 | C | 20050517 | CA 1999-2350061 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| AU 2000014366 | A5 | 20000529 | AU 2000-14366 | 19991111 |
| AU 762410 | B2 | 20030626 | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| BR 9915142 | A | 20010807 | BR 1999-15142 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| EP 1128819 | A1 | 20010905 | EP 1999-971702 | 19991111 |
| EP 1128819 | B1 | 20030820 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, | | | | |
| IE, SI, LT, LV, FI, RO | | | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| EE 200100254 | A | 20021216 | EE 2001-254 | 19991111 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| JP 2003517446 | T2 | 20030527 | JP 2000-580595 | 19991111 |

| | | | | | |
|---------------|----|----------|--|---|----------|
| JP 3616011 | B2 | 20050202 | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| NZ 511430 | A | 20030530 | WO 1999-SE2052 | W | 19991111 |
| | | | NZ 1999-511430 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| AT 247458 | E | 20030915 | WO 1999-SE2052 | W | 19991111 |
| | | | AT 1999-971702 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| US 6911217 | B1 | 20050628 | US 2001-763281 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| SK 284758 | B6 | 20051103 | SK 2001-625 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | A | 19991111 |
| TW 222879 | B1 | 20041101 | TW 2000-89102338 | | 20000211 |
| | | | SE 1998-3871 | A | 19981111 |
| CA 2387973 | AA | 20010517 | CA 2000-2387973 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| WO 2001034139 | A1 | 20010517 | WO 2000-SE2061 | | 20001024 |
| W: | | | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | |
| RW: | | | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| AU 2001013192 | A5 | 20010606 | AU 2001-13192 | | 20001024 |
| AU 784104 | B2 | 20060202 | | | |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| BR 2000015346 | A | 20020625 | BR 2000-15346 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| EP 1227806 | A1 | 20020807 | EP 2000-975092 | | 20001024 |
| EP 1227806 | B1 | 20050803 | | | |
| R: | | | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | |
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| HU 200203028 | A2 | 20030228 | HU 2002-3028 | | 20001024 |
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| JP 2003513918 | T2 | 20030415 | JP 2001-536139 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |

| | | | | |
|---|-------|----------|-----------------|-------------|
| NZ 518309 | A | 20030530 | NZ 2000-518309 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| EE 200200245 | A | 20030616 | WO 2000-SE2061 | W 20001024 |
| | | | EE 2002-245 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| AT 300941 | E | 20050815 | AT 2000-975092 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| PT 1227806 | T | 20051031 | PT 2000-975092 | 20001024 |
| | | | WO 1999-SE2052 | W 19991111 |
| | | | SE 2000-782 | A 20000309 |
| ES 2245320 | T3 | 20060101 | ES 2000-975092 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| US 6630162 | B1 | 20031007 | US 2000-708428 | 20001109 |
| | | | WO 1999-SE2052 | A2 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | US 2000-202862P | P 20000510 |
| ZA 2001003575 | A | 20020503 | ZA 2001-3575 | 20010503 |
| | | | SE 1998-3871 | A 19981111 |
| NO 2001002314 | A | 20010709 | NO 2001-2314 | 20010510 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| HR 2001000333 | A1 | 20030430 | HR 2001-333 | 20010510 |
| HR 20010333 | B1 | 20041031 | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| BG 105582 | A | 20011231 | BG 2001-105582 | 20010608 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| HK 1040917 | A1 | 20050527 | HK 2002-102521 | 20020404 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | A 19991111 |
| ZA 2002002767 | A | 20030409 | ZA 2002-2767 | 20020409 |
| | | | WO 1999-SE2052 | A 19991111 |
| NO 2002002264 | A | 20020513 | NO 2002-2264 | 20020513 |
| | | | WO 1999-SE2052 | W 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| FAN 2001:359788 | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| ----- | ----- | ----- | ----- | ----- |
| PI WO 2001034139 | A1 | 20010517 | WO 2000-SE2061 | 20001024 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |

| | | | | |
|---|------|----------|-----------------|-------------|
| WO 2000027364 | A1 | 20000518 | WO 1999-SE2052 | 19991111 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| CA 2387973 | AA | 20010517 | CA 2000-2387973 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| AU 2001013192 | A5 | 20010606 | AU 2001-13192 | 20001024 |
| AU 784104 | B2 | 20060202 | | |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| BR 2000015346 | A | 20020625 | BR 2000-15346 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| EP 1227806 | A1 | 20020807 | EP 2000-975092 | 20001024 |
| EP 1227806 | B1 | 20050803 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | | | |
| | | | WO 1999-SE2052 | W 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| HU 200203028 | A2 | 20030228 | HU 2002-3028 | 20001024 |
| | | | WO 1999-SE2052 | W 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| JP 2003513918 | T2 | 20030415 | JP 2001-536139 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| NZ 518309 | A | 20030530 | NZ 2000-518309 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| EE 200200245 | A | 20030616 | EE 2002-245 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| AT 300941 | E | 20050815 | AT 2000-975092 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| NO 2002002264 | A | 20020513 | NO 2002-2264 | 20020513 |
| | | | WO 1999-SE2052 | W 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| FAN 2003:784592 | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| ----- | ---- | ----- | ----- | ----- |
| PI US 6630162 | B1 | 20031007 | US 2000-708428 | 20001109 |
| | | | WO 1999-SE2052 | A2 19991111 |
| | | | SE 2000-782 | A 20000309 |

US 2000-202862P P 20000510
 WO 1999-SE2052 19991111
 WO 200027364 A1 20000518
 W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
 SE 1998-3871 A 19981111
 WO 1999-SE1463 W 19990826

AB A method and formulation for treating unstable or overactive urinary bladder, wherein tolterodine or a tolterodine-related compound, or a pharmaceutically acceptable salt thereof, is administered to a patient in a pharmaceutically effective amount thereof through a controlled release formulation that administers tolterodine or said tolterodine-related compound, or salt thereof, at a controlled rate for at least 24 h. A controlled-release capsule containing nonpareil beads coated by an Et cellulose layer, a tolterodine/HPMC layer, and a sustained-release Et cellulose/HPMC layer was prepared

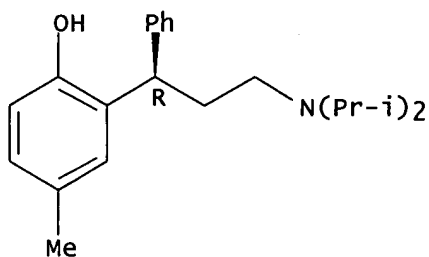
IT 124937-52-6
 RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (controlled-release tolterodine formulations)

RN 124937-52-6 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5
 CMF C22 H31 N O

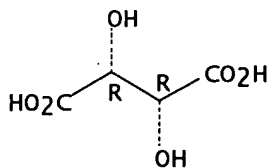
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 79 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:692703 CAPLUS

DN 132:87770

TI Ketoconazole inhibits the metabolism of tolterodine in subjects with deficient CYP2D6 activity

AU Brynne, N.; Forslund, C.; Hallen, B.; Gustafsson, L. L.; Bertilsson, L.
CS Department of Clinical Pharmacology, Pharmacia and Upjohn AB, Stockholm, SE-112 87, Swed.

SO British Journal of Clinical Pharmacology (1999), 48(4), 564-572
CODEN: BCPHBM; ISSN: 0306-5251

PB Blackwell Science Ltd.

DT Journal

LA English

AB The pharmacokinetics and safety of tolterodine and tolterodine metabolites was studied after single- and multiple-dose administration in the absence and presence of ketoconazole, an inhibitor of cytochrome P 450 (CYP) 3A4, in healthy volunteers with deficient CYP2D6 activity, i.e. poor metabolizers of debrisoquine. Eight healthy volunteers received single oral doses (2 mg) of tolterodine L-tartrate. Following a wash-out period of about 3 mo, six of the subjects participated in a multiple-dose (1 mg twice daily) phase of the study. Ketoconazole 200 mg was given once daily for 4-4.5 days during both the single and multiple dose tolterodine administration phases. Blood samples were drawn and the pharmacokinetics of tolterodine and its metabolites were determined. A decrease ($P < 0.01$) in apparent oral clearance of tolterodine, from 10-12 l h⁻¹ to 4.3-4.7 l h⁻¹, was obtained during concomitant administration of ketoconazole, yielding at least a two-fold increase in the area under the serum concentration-time

curve

after single as well as after multiple doses following single dose administration of tolterodine. The mean (\pm s.d.) terminal half-life increased by 50% from 9.7 \pm 2.7 h to 15 \pm 5.4 h in the presence of ketoconazole. CYP3A4 is the major enzyme involved in the elimination of tolterodine in individuals with deficient CYP2D6 activity (poor metabolizers), since oral clearance of tolterodine decreased by 60% during ketoconazole coadministration. This inhibition resulted in 2.1-fold increase in AUC.

IT 124937-52-6, Detrusitol

RL: ADV (Adverse effect, including toxicity); BPR (Biological process);
BSU (Biological study, unclassified); BIOL (Biological study); PROC
(Process)

(ketoconazole inhibits the metabolism of tolterodine in human subjects with deficient CYP2D6 activity)

RN 124937-52-6 CAPLUS

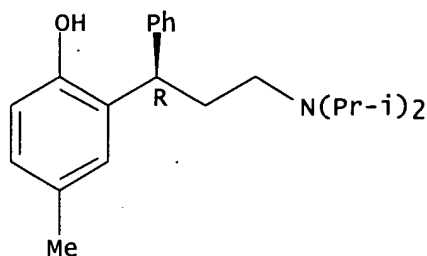
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
(2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

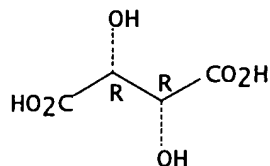
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 80 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1999:692702 CAPLUS
 DN 132:87769
 TI Fluoxetine inhibits the metabolism of tolterodine-pharmacokinetic implications and proposed clinical relevance
 AU Brynne, N.; Svanstrom, C.; Aberg-Wistedt, A.; Hallen, B.; Bertilsson, L.
 CS Departments of Clinical Pharmacology, Pharmacia and Upjohn AB, Stockholm, SE-112 87, Swed.
 SO British Journal of Clinical Pharmacology (1999), 48(4), 553-563
 CODEN: BCPHBM; ISSN: 0306-5251
 PB Blackwell Science Ltd.
 DT Journal
 LA English
 AB The change in disposition of tolterodine during coadministration of the potent cytochrome P 450 2D6 (CYP2D6) inhibitor fluoxetine was studied. Thirteen patients received tolterodine L-tartrate 2 mg twice daily for 2.5 days, followed by fluoxetine 20 mg once daily for 3 wk and then concomitant administration for an addnl. 2.5 days. They were characterized as extensive metabolizers (EM1 with one functional CYP2D6 gene, EM2 with two functional genes) or poor metabolizers (PM). Nine patients, three EM2 and four EM1 and two PM, completed the trial. Following tolterodine administration, the area under the serum concentration-time curve (AUC) of tolterodine was 4.4-times and 30-times higher among EM1 and PM, resp., compared with EM2. The AUC of the 5-hydroxymethyl metabolite (5-HM) was not quantifiable in PM. Fluoxetine significantly decreased ($P < 0.002$) the oral clearance of tolterodine by 93% in EM2 and by 80% in EM1. The AUC of 5-HM increased in EM2 and decreased in EM1. However, the exposure to the active moiety (unbound tolterodine +5-HM) was not significantly increased in the two phenotypes. The subdivision of the EM group showed a 2.1-fold increase in active moiety in EM2 but the exposure

was still similar to EM1 compared with before the interaction. The study suggests a difference in the pharmacokinetics of tolterodine and its 5-hydroxymethyl metabolite depending on the number of functional CYP2D6 genes. Fluoxetine significantly inhibited the hydroxylation of tolterodine. Despite the effect on the pharmacokinetics of tolterodine in extensive metabolizers, the clin. effect is expected to be within normal variation.

IT 124937-52-6

RL: ADV (Adverse effect, including toxicity); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(fluoxetine inhibits the metabolism of tolterodine-pharmacokinetics)

RN 124937-52-6 CAPLUS

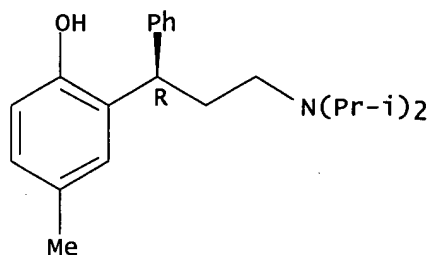
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

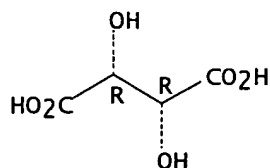


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 81 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:743587 CAPLUS

DN 128:70329

TI Determination of tolterodine and the 5-hydroxymethyl metabolite in plasma, serum and urine using gas chromatography-mass spectrometry

AU Palmer, L.; Andersson, L.; Andersson, T.; Stenberg, U.

CS Department of Bioanalytical Chemistry, Pharmacia and Upjohn AB, Uppsala, S-751 82, Swed.

SO Journal of Pharmaceutical and Biomedical Analysis (1997), 16(1), 155-165

CODEN: JPBADA; ISSN: 0731-7085

PB Elsevier Science B.V.

DT Journal

LA English

AB A specific and sensitive capillary gas chromatog.-mass spectrometry assay for the determination of tolterodine and the 5-hydroxymethyl metabolite

(Labcode

DD 01) in plasma, serum and urine is described. Extraction of the analytes was performed with liquid/liquid or solid-phase extraction prior to derivatization

with

a silyl reagent. The derivs. were quantified by selected ion monitoring mass spectrometry using deuterium-labeled internal stds. A single level calibration curve was utilised for quantification of plasma, serum and urine concns. of tolterodine and DD 01. The accuracy (inter- and intra-day) for both analytes was within 87-110% in the range 0.5 and 50 ng mL⁻¹ and precision was better than 90%. Overall, this method was shown to be reliable for pharmacokinetic assays of tolterodine and the metabolite DD 01 in samples from preclin. and clin. studies.

IT 124937-52-6, PNU 200583E

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(determination of tolterodine and the 5-hydroxymethyl metabolite in plasma, serum and urine using gas chromatog.-mass spectrometry)

RN 124937-52-6 CAPLUS

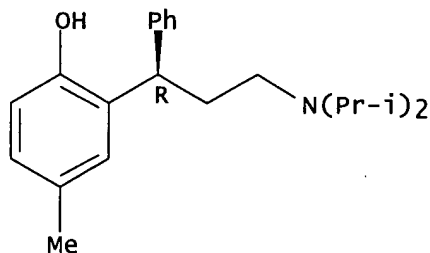
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

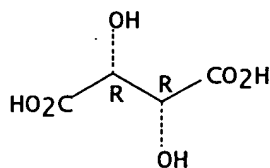


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 82 OF 82 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1990:55211 CAPLUS
DN 112:55211
TI 3,3-Diphenylpropylamines as drugs, especially anticholinergic agents, and
their preparation and formulations containing them
IN Joensson, Nils Ake; Sparf, Bengt Ake; Mikiver, Lembit; Moses, Pinchas;
Nilvebrant, Lisbet; Glas, Gunilla
PA Kabivitrum AB, Swed.
SO Eur. Pat. Appl., 37 pp.
CODEN: EPXXDW

DT Patent
LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|---|---------------------------------------|
| PI | EP 325571 | A1 | 19890726 | EP 1989-850017 | 19890120 |
| | EP 325571 | B1 | 19910807 | | |
| | R: ES, GR | | | | |
| | WO 8906644 | A1 | 19890727 | SE 1988-207 WO 1989-SE16 | A 19880122 19890120 |
| | W: AU, DK, FI, HU, JP, NO, US RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE | | | | |
| | AU 8929329 | A1 | 19890811 | SE 1988-207 AU 1989-29329 | A 19880122 19890120 |
| | AU 635493 | B2 | 19930325 | | |
| | EP 354234 | A1 | 19900214 | SE 1988-207 WO 1989-SE16 EP 1989-901611 | A 19880122 A 19890120 19890120 |
| | R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE | | | | |
| | JP 03503163 | T2 | 19910718 | SE 1988-207 JP 1989-501413 | A 19880122 19890120 |
| | | | | SE 1988-207 WO 1989-SE16 | A 19880122 W 19890120 |
| | AT 65990 | E | 19910815 | AT 1989-850017 SE 1988-207 EP 1989-850017 | 19890120 A 19880122 A 19890120 |
| | HU 58040 | A2 | 19920128 | HU 1989-1069 | 19890120 |
| | HU 212729 | B | 19961028 | | |
| | ES 2029384 | T3 | 19920801 | SE 1988-207 ES 1989-850017 | A 19880122 19890120 |
| | CA 1340223 | A1 | 19981215 | SE 1988-207 CA 1989-588821 | A 19880122 19890120 |
| | NO 9003085 | A | 19900711 | SE 1988-207 NO 1990-3085 | A 19880122 19900711 |
| | NO 173496 | B | 19930913 | | |
| | NO 173496 | C | 19931222 | | |
| | | | | SE 1988-207 WO 1989-SE16 | A 19880122 W 19890120 |
| | DK 9001725 | A | 19900719 | DK 1990-1725 | 19900719 |
| | DK 172103 | B1 | 19971027 | | |
| | | | | SE 1988-207 WO 1989-SE16 | A 19880122 A 19890120 |
| | FI 109900 | B1 | 20021031 | FI 1990-3688 | 19900720 |
| | | | | SE 1988-207 WO 1989-SE16 | A 19880122 W 19890120 |
| | US 5382600 | A | 19950117 | US 1991-810185 SE 1988-207 US 1990-543767 | 19911219 A 19880122 B1 19900924 |

OS MARPAT 112:55211

AB The title compds. I ($R_1 = H, Me$; $R_2-R_4 = H, Me, MeO, OH, halo, carbamoyl$, etc.; $X = NR_5R_6$; $R_5, R_6 = \text{non-aromatic hydrocarbyl}$, together containing ≥ 3 C atoms; or NR_5R_6 may form a ring) and physiol. acceptable acid addition salts, useful as drugs (especially as anticholinergics), were prepared A mixture of

3,3-bis-(2-methoxyphenyl)propyl p-toluenesulfonate and diisopropylamine in MeCN was heated at 80° for 4-6 days to give, after workup and treatment with oxalic acid, the title compound N,N-diisopropyl-3,3-bis-(2-methoxyphenyl)propylamine oxalate. I ($R_1 = H, R_2 = R_3 = H, R_4 = OH, X = NMeCMe_3$) (II) exhibited an IC_{50} of 4.9×10^{-9} M in a test for anticholinergic activity in isolated guinea pig bladder. This compared to 5.2×10^{-7} M for terodiline; II also showed comparable Ca-antagonistic effect and lower toxicity. Formulations containing I are given.

IT 124937-52-6P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of, as drug, especially anticholinergic)

RN 124937-52-6 CAPLUS

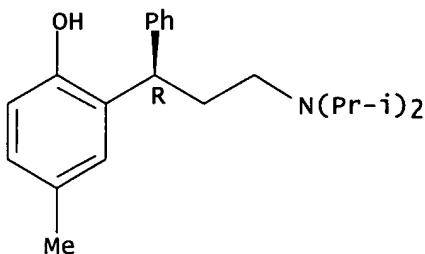
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (1:1) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

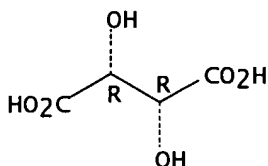


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



=> d 112 1-6 fbib ab hitstr

L12 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:600616 CAPLUS

DN 145:83107

TI Preparation of tolterodine from protected benzylmethylphenol and (diisopropylamino)ethyl halides or sulfonates

IN Yamada, Tsukasa; Itaya, Nobushige; Tanaka, Masahide

PA Sumitomo Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------|----------|-----------------|----------|
| PI | JP 2006160622 | A2 | 20060622 | JP 2004-350942 | 20041203 |
| | | | | JP 2004-350942 | 20041203 |

OS MARPAT 145:83107

AB Tolterodine, useful for treatment of incontinence, is prepared by (1) treatment of benzylphenols I (R = OH-protecting group; A = H) with bases, (2) reaction with (Me₂CH)₂NCH₂CH₂X (X = halo, alkylsulfonyloxy, arylsulfonyloxy) (II), and (3) deprotection of the resulting I [R = same as above; A = CH₂CH₂N(CHMe₂)₂]. Thus, a mixture of 2-benzyl-4-methylanisole (III) and 3-benzyl-4-methylanisole (2.7:1), prepared by reacting 4-methylanisole and PhCH₂OH, was dissolved in THF and treated with BuLi at 0° for 6 h. II (X = Cl) was added dropwise to the above reaction mixture at -78° and the reaction mixture was stirred at room temperature for 1 h to give 98.5% (based on III) N,N-diisopropyl-3-(2-methoxy-5-methylphenyl)-3-phenylpropanamine as mixture with N,N-diisopropyl-3-(5-methoxy-2-methylphenyl)-3-phenylpropanamine (10:1). This mixture was dissolved in AcOH and treated with HBr under reflux for 3 h to give 85.7% racemic tolterodine. The racemate was further converted into optically-active tolterodine tartrate upon reaction with L-tartaric acid.

IT 209747-05-7P

RL: IMF (Industrial manufacture); PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation)

(preparation of tolterodine from protected benzylmethylphenol and (diisopropylamino)ethyl halides or sulfonates using bases)

RN 209747-05-7 CAPLUS

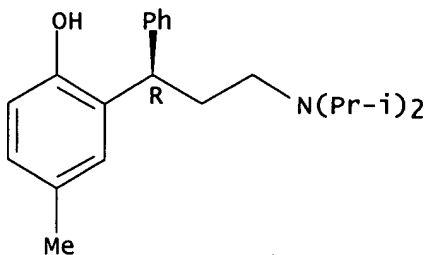
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

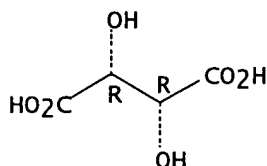
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.

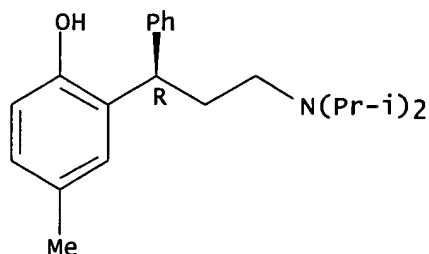


L12 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:1209252 CAPLUS
 DN 144:16947
 TI Juvenile pig detrusor: Effects of propiverine and three of its metabolites
 AU Wuest, Melinda; Braeter, Manfred; Schoeberl, Christian; Ravens, Ursula
 CS Institute of Pharmacology and Toxicology, Dresden University of
 Technology, Dresden, Germany
 SO European Journal of Pharmacology (2005), 524(1-3), 145-148
 CODEN: EJPHAZ; ISSN: 0014-2999
 PB Elsevier B.V.
 DT Journal
 LA English
 AB In isolated detrusor strips, propiverine is known to be effective to decrease contractions elicited by elec. field stimulation (EFS). Here we investigated whether the metabolites M-5, M-6 and M-14 of propiverine retain the pharmacol. properties of the parent compound also in juvenile organisms. EFS-induced contractions of detrusor strips from juvenile pigs are more sensitive to atropine than strips from mature pigs. The atropine-resistant component of contraction is also significantly larger in juvenile pigs. Propiverine, its metabolites M-5, M-14 and also tolterodine completely reduced detrusor contraction in juvenile pigs. M-6 almost did not affect atropine-resistant contractions. We conclude that juvenile pig detrusors possess a higher atropine-resistant component of EFS-elicited contraction. Nevertheless order of potency and efficacy of propiverine and its metabolites M-5 and M-14 are similar in juvenile and mature pigs, while M-6 only reduces atropine-sensitive contractions in the juvenile organism.
 IT 209747-05-7
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (effects of propiverine and three of its metabolites on juvenile pig detrusor)
 RN 209747-05-7 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5
CMF C22 H31 N O

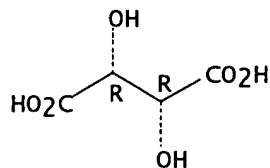
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2003:722238 CAPLUS
 DN 140:321103
 TI Synthesis of tolterodine L-tartrate
 IN Yuan, Zhedong; Yu, Xiong; Wang, Qiang; Zhang, Xiuping
 PA Shanghai Institute of Pharmaceutical Industry, Peop. Rep. China
 SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 8 pp.
 CODEN: CNXXEV
 DT Patent
 LA Chinese
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|------|----------|----------------------------------|----------------------|
| PI | CN 1379018 | A | 20021113 | CN 2002-111560 CN 2002-111560 | 20020429 20020429 |

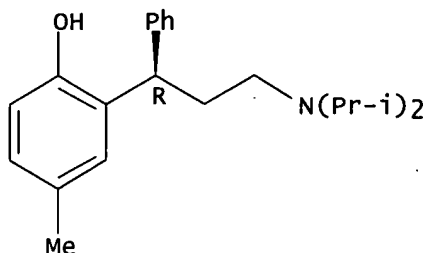
OS CASREACT 140:321103
 AB The process comprises cyclizing trans-cinnamic acid with 4-methylphenol in the presence of H₂SO₄ at 120-150° to obtain 6-methyl-4-phenyl-3,4-dihydrocoumarin, methylating with di-Me sulfate in alc. or acetone to obtain 3-(2-methoxy-5-methylphenyl)-3-phenylpropanoic acid, chlorinating with SOCl₂ and aminating with diisopropylamine to obtain N,N-diisopropyl-3-(2-methoxy-5-methylphenyl)-3-phenylpropanamide, reducing with KBH₄ and Lewis acid (such as ZnCl₂ or AlCl₃) in solvent (such as THF, dioxane, or toluene) at 80-100° to obtain N,N-diisopropyl-3-(2-methoxy-5-methylphenyl)-3-phenylpropanamine; demethylating with >40% HBr to obtain N,N-diisopropyl-3-(2-hydroxy-5-methylphenyl)-3-phenylpropanamine; and salifying with L-tartaric acid in alc. or 90-95% alc.
 IT 209747-05-7P
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
 (synthesis of tolterodine L-tartrate)

RN 209747-05-7 CAPLUS
 CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-,
 (2R,3R)-2,3-dihydroxybutanedioate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5
 CMF C22 H31 N O

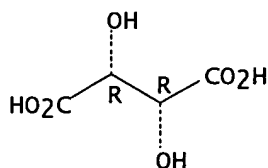
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
 CMF C4 H6 O6

Absolute stereochemistry.



L12 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2003:242003 CAPLUS
 DN 138:260465
 TI Pharmaceutical composition comprising receptor agonists and antagonists
 treatment of urinary disorder
 IN Arneric, Stephen P.; Andersson, Per-Olof
 PA USA
 SO U.S. Pat. Appl. Publ., 8 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------|----------|-----------------|------------|
| PI | US 2003060513 | A1 | 20030327 | US 2001-965556 | 20010927 |
| | CA 2461731 | AA | 20030403 | CA 2002-2461731 | 20020926 |
| | | | | US 2001-965556 | A 20010927 |
| | | | | SE 2001-3858 | A 20011120 |
| | | | | WO 2002-SE1748 | W 20020926 |
| | WO 2003026564 | A2 | 20030403 | WO 2002-SE1748 | 20020926 |
| | WO 2003026564 | A3 | 20031211 | | |
| | WO 2003026564 | C2 | 20040617 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2001-965556 A 20010927
SE 2001-3858 A 20011120
EP 2002-775633 20020926

EP 1438035 A2 20040721
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

US 2001-965556 A 20010927
SE 2001-3858 A 20011120
WO 2002-SE1748 W 20020926

BR 2002012824 A 20041013
BR 2002-12824 20020926
US 2001-965556 A 20010927
SE 2001-3858 A 20011120
WO 2002-SE1748 W 20020926

CN 1558756 A 20041229
CN 2002-818876 20020926
US 2001-965556 A 20010927
SE 2001-3858 A 20011120

JP 2005503424 T2 20050203
JP 2003-530203 20020926
US 2001-965556 A 20010927
SE 2001-3858 A 20011120
WO 2002-SE1748 W 20020926

US 2004116533 A1 20040617
US 2003-729764 20031205
US 2001-965556 A1 20010927

ZA 2004002362 A 20050120
ZA 2004-2362 20040325
US 2001-965556 A 20010927

PATENT FAMILY INFORMATION:

FAN 2003:261600

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| WO 2003026564 | A2 | 20030403 | WO 2002-SE1748 | 20020926 |
| WO 2003026564 | A3 | 20031211 | | |
| WO 2003026564 | C2 | 20040617 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2001-965556 A 20010927
SE 2001-3858 A 20011120

US 2003060513 A1 20030327
CA 2461731 AA 20030403
US 2001-965556 20010927
CA 2002-2461731 20020926
US 2001-965556 A 20010927
SE 2001-3858 A 20011120
WO 2002-SE1748 W 20020926

EP 1438035 A2 20040721
EP 2002-775633 20020926
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

US 2001-965556 A 20010927

| | | | | | |
|---------------|----|----------|----------------|---|----------|
| | | | SE 2001-3858 | A | 20011120 |
| | | | WO 2002-SE1748 | W | 20020926 |
| BR 2002012824 | A | 20041013 | BR 2002-12824 | | 20020926 |
| | | | US 2001-965556 | A | 20010927 |
| | | | SE 2001-3858 | A | 20011120 |
| | | | WO 2002-SE1748 | W | 20020926 |
| JP 2005503424 | T2 | 20050203 | JP 2003-530203 | | 20020926 |
| | | | US 2001-965556 | A | 20010927 |
| | | | SE 2001-3858 | A | 20011120 |
| | | | WO 2002-SE1748 | W | 20020926 |

AB The present invention concerns the field of urol. The invention provides a novel pharmaceutical composition, comprising a pharmaceutically effective combination of (i) a first compound selected from the group consisting of muscarinic receptor antagonists, 5 α -reductase inhibitors, and α -adrenergic receptor antagonists, and precursors and pharmaceutically acceptable salts thereof, and (ii) a second compound selected from the group consisting of 5-HT1a receptor agonists and antagonists, and precursors and pharmaceutically acceptable salts thereof, and optionally a pharmaceutically acceptable carrier or diluent therefor. There is also provided a method of therapeutical treatment of urinary disorder in a mammal, including man, comprising administering to said mammal, including man, in need of such treatment, a therapeutically effective amount of a composition according to the invention. A pharmaceutical composition contained between about 2 mg to about 20 mg of 5 α -reductase inhibitor and between about 0.5 mg to about 50 mg of neutral 5-HT1a receptor antagonist. The composition is administered to a patient for the treatment of urinary disorder.

IT 209747-05-7

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(pharmaceutical composition comprising receptor agonists and antagonists treatment of urinary disorder)

RN 209747-05-7 CAPLUS

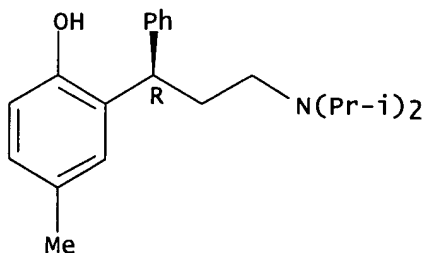
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

Absolute stereochemistry. Rotation (+).

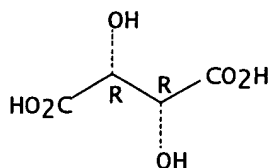


CM 2

CRN 87-69-4

CMF C4 H6 O6

Absolute stereochemistry.



L12 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2001:359788 CAPLUS
 DN 134:371775
 TI Pharmaceutical formulation containing tolterodine for bladder disorders
 IN Nilvebrant, Lisbeth; Hallen, Bengt; Olsson, Birgitta; Stroembom, Jan;
 Gren, Torkel; Ringberg, Anders; Wikberg, Martin
 PA Pharmacia AB, Swed.
 SO PCT Int. Appl., 23 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 5

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|------------|
| PI | WO 2001034139 | A1 | 20010517 | WO 2000-SE2061 | 20001024 |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | WO 1999-SE2052 | A 19991111 |
| | | | | SE 2000-782 | A 20000309 |
| | WO 2000027364 | A1 | 20000518 | WO 1999-SE2052 | 19991111 |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | SE 1998-3871 | A 19981111 |
| | | | | WO 1999-SE1463 | W 19990826 |
| CA | 2387973 | AA | 20010517 | CA 2000-2387973 | 20001024 |
| | | | | WO 1999-SE2052 | A 19991111 |
| | | | | SE 2000-782 | A 20000309 |
| | | | | WO 2000-SE2061 | W 20001024 |
| AU | 2001013192 | A5 | 20010606 | AU 2001-13192 | 20001024 |
| AU | 784104 | B2 | 20060202 | | |
| | | | | WO 1999-SE2052 | A 19991111 |
| | | | | SE 2000-782 | A 20000309 |
| | | | | WO 2000-SE2061 | W 20001024 |
| BR | 2000015346 | A | 20020625 | BR 2000-15346 | 20001024 |
| | | | | WO 1999-SE2052 | A 19991111 |
| | | | | SE 2000-782 | A 20000309 |
| | | | | WO 2000-SE2061 | W 20001024 |
| EP | 1227806 | A1 | 20020807 | EP 2000-975092 | 20001024 |
| EP | 1227806 | B1 | 20050803 | | |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL

| | | | | | |
|---------------|----|----------|----------------|---|----------|
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| HU 200203028 | A2 | 20030228 | HU 2002-3028 | | 20001024 |
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| JP 2003513918 | T2 | 20030415 | JP 2001-536139 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| NZ 518309 | A | 20030530 | NZ 2000-518309 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| EE 200200245 | A | 20030616 | EE 2002-245 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| AT 300941 | E | 20050815 | AT 2000-975092 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| NO 2002002264 | A | 20020513 | NO 2002-2264 | | 20020513 |
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |

PATENT FAMILY INFORMATION:

FAN 2000:161114

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--------------|---|----------|-------------------|-----------------|------------|
| PI | WO 2000012069 | A1 | 20000309 | WO 1999-SE1463 | 19990826 |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | | | | SE 1998-2864 | A 19980827 |
| | | | | SE 1998-3871 | A 19981111 |
| CA 2311755 | AA | 20000309 | CA 1999-2311755 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| AU 9958918 | A1 | 20000321 | WO 1999-SE1463 | W | 19990826 |
| AU 745190 | B2 | 20020314 | AU 1999-58918 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| EP 1039882 | A1 | 20001004 | EP 1999-946521 | | 19990826 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| TR 200001998 | T1 | 20010122 | TR 2000-200001998 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |

| | | | | | |
|---|----|----------|-----------------|---|----------|
| HU 200100437 | A2 | 20020529 | SE 1998-3871 | A | 19981111 |
| | | | HU 2001-437 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| NZ 504618 | A | 20020927 | SE 1998-3871 | A | 19981111 |
| | | | NZ 1999-504618 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| IL 136294 | A1 | 20040208 | WO 1999-SE1463 | W | 19990826 |
| | | | IL 1999-136294 | | 19990826 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| CA 2350061 | AA | 20000518 | WO 1999-SE1463 | W | 19990826 |
| CA 2350061 | C | 20050517 | CA 1999-2350061 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| WO 2000027364 | A1 | 20000518 | WO 1999-SE2052 | | 19991111 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, | | | | | |
| CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, | | | | | |
| IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, | | | | | |
| MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, | | | | | |
| SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, | | | | | |
| DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, | | | | | |
| CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| AU 2000014366 | A5 | 20000529 | AU 2000-14366 | | 19991111 |
| AU 762410 | B2 | 20030626 | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| BR 9915142 | A | 20010807 | BR 1999-15142 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| EP 1128819 | A1 | 20010905 | EP 1999-971702 | | 19991111 |
| EP 1128819 | B1 | 20030820 | | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, | | | | | |
| IE, SI, LT, LV, FI, RO | | | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| HU 200105038 | A2 | 20020629 | HU 2001-5038 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| EE 200100254 | A | 20021216 | EE 2001-254 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| JP 2003517446 | T2 | 20030527 | JP 2000-580595 | | 19991111 |
| JP 3616011 | B2 | 20050202 | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| NZ 511430 | A | 20030530 | NZ 1999-511430 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| AT 247458 | E | 20030915 | AT 1999-971702 | | 19991111 |

| | | | | | |
|--|------|----------|------------------|----------|----------|
| PT 1128819 | T | 20031231 | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| | | | PT 1999-971702 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| ES 2204193 | T3 | 20040416 | ES 1999-971702 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| US 6911217 | B1 | 20050628 | US 2001-763281 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| SK 284758 | B6 | 20051103 | SK 2001-625 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | A | 19991111 |
| TW 222879 | B1 | 20041101 | TW 2000-89102338 | | 20000211 |
| | | | SE 1998-3871 | A | 19981111 |
| BG 104476 | A | 20001229 | BG 2000-104476 | | 20000526 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| NO 2000002977 | A | 20000609 | NO 2000-2977 | | 20000609 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3864 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| US 6770295 | B1 | 20040803 | US 2000-582498 | | 20000809 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| ZA 2001003575 | A | 20020503 | ZA 2001-3575 | | 20010503 |
| | | | SE 1998-3871 | A | 19981111 |
| NO 2001002314 | A | 20010709 | NO 2001-2314 | | 20010510 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| HR 2001000333 | A1 | 20030430 | HR 2001-333 | | 20010510 |
| HR 20010333 | B1 | 20041031 | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| BG 105582 | A | 20011231 | BG 2001-105582 | | 20010608 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| HK 1034664 | A1 | 20060908 | HK 2001-104868 | | 20010712 |
| | | | SE 1998-2864 | A | 19980827 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| HK 1040917 | A1 | 20050527 | HK 2002-102521 | | 20020404 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | A | 19991111 |
| FAN 2000:161115 | | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
| PI WO 2000012070 | A1 | 20000309 | WO 1999-SE1464 | 19990826 | |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, | | | | | |
| CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, | | | | | |
| IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, | | | | | |

| | | | | |
|------------------|--|----------|-----------------|-------------|
| | MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW | | | |
| RW: | GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | |
| CA 2341063 | AA | 20000309 | SE 1998-2864 | A 19980827 |
| | | | CA 1999-2341063 | 19990826 |
| | | | SE 1998-2864 | A 19980827 |
| AU 9958919 | A1 | 20000321 | WO 1999-SE1464 | W 19990826 |
| AU 758399 | B2 | 20030320 | AU 1999-58919 | 19990826 |
| | | | SE 1998-2864 | A 19980827 |
| | | | WO 1999-SE1464 | W 19990826 |
| EP 1105111 | A1 | 20010613 | EP 1999-946522 | 19990826 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | |
| | | | SE 1998-2864 | A 19980827 |
| | | | WO 1999-SE1464 | W 19990826 |
| JP 2002523446 | T2 | 20020730 | JP 2000-567189 | 19990826 |
| | | | SE 1998-2864 | A 19980827 |
| | | | WO 1999-SE1464 | W 19990826 |
| NZ 509928 | A | 20030829 | NZ 1999-509928 | 19990826 |
| | | | SE 1998-2864 | A 19980827 |
| | | | WO 1999-SE1464 | W 19990826 |
| ZA 2000002488 | A | 20010516 | ZA 2000-2488 | 20000519 |
| | | | SE 1998-2864 | A 19980827 |
| US 6517864 | B1 | 20030211 | US 2001-763654 | 20010430 |
| | | | SE 1998-2864 | A 19980827 |
| | | | WO 1999-SE1464 | W 19990826 |
| US 2003124179 | A1 | 20030703 | US 2002-301719 | 20021122 |
| US 7008637 | B2 | 20060307 | | |
| | | | SE 1998-2864 | A 19980827 |
| | | | WO 1999-SE1464 | W 19990826 |
| | | | US 2001-763654 | A1 20010430 |
| FAN 2000:335217 | | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| ----- | ----- | ----- | ----- | ----- |
| PI WO 2000027364 | A1 | 20000518 | WO 1999-SE2052 | 19991111 |
| W: | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | |
| RW: | GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| WO 2000012069 | A1 | 20000309 | WO 1999-SE1463 | 19990826 |
| W: | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW | | | |
| RW: | GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | |
| | | | SE 1998-2864 | A 19980827 |
| | | | SE 1998-3871 | A 19981111 |
| CA 2350061 | AA | 20000518 | CA 1999-2350061 | 19991111 |
| CA 2350061 | C | 20050517 | | |

| | | | | | |
|---|----|----------|------------------|---|----------|
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| AU 2000014366 | A5 | 20000529 | WO 1999-SE2052 | W | 19991111 |
| AU 762410 | B2 | 20030626 | AU 2000-14366 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| BR 9915142 | A | 20010807 | BR 1999-15142 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| EP 1128819 | A1 | 20010905 | EP 1999-971702 | | 19991111 |
| EP 1128819 | B1 | 20030820 | | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| EE 200100254 | A | 20021216 | EE 2001-254 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| JP 2003517446 | T2 | 20030527 | JP 2000-580595 | | 19991111 |
| JP 3616011 | B2 | 20050202 | | | |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| NZ 511430 | A | 20030530 | NZ 1999-511430 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| AT 247458 | E | 20030915 | AT 1999-971702 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | W | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| US 6911217 | B1 | 20050628 | US 2001-763281 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | W | 19991111 |
| SK 284758 | B6 | 20051103 | SK 2001-625 | | 19991111 |
| | | | SE 1998-3871 | A | 19981111 |
| | | | WO 1999-SE1463 | A | 19990826 |
| | | | WO 1999-SE2052 | A | 19991111 |
| TW 222879 | B1 | 20041101 | TW 2000-89102338 | | 20000211 |
| | | | SE 1998-3871 | A | 19981111 |
| CA 2387973 | AA | 20010517 | CA 2000-2387973 | | 20001024 |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |
| | | | WO 2000-SE2061 | W | 20001024 |
| WO 2001034139 | A1 | 20010517 | WO 2000-SE2061 | | 20001024 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | | |
| | | | WO 1999-SE2052 | A | 19991111 |
| | | | SE 2000-782 | A | 20000309 |

| | | | | |
|---|----|----------|-----------------|-------------|
| AU 2001013192 | A5 | 20010606 | AU 2001-13192 | 20001024 |
| AU 784104 | B2 | 20060202 | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| BR 2000015346 | A | 20020625 | BR 2000-15346 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| EP 1227806 | A1 | 20020807 | EP 2000-975092 | 20001024 |
| EP 1227806 | B1 | 20050803 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | | | |
| | | | WO 1999-SE2052 | W 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| HU 200203028 | A2 | 20030228 | HU 2002-3028 | 20001024 |
| | | | WO 1999-SE2052 | W 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| JP 2003513918 | T2 | 20030415 | JP 2001-536139 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| NZ 518309 | A | 20030530 | NZ 2000-518309 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| EE 200200245 | A | 20030616 | EE 2002-245 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| AT 300941 | E | 20050815 | AT 2000-975092 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |
| PT 1227806 | T | 20051031 | PT 2000-975092 | 20001024 |
| | | | WO 1999-SE2052 | W 19991111 |
| | | | SE 2000-782 | A 20000309 |
| ES 2245320 | T3 | 20060101 | ES 2000-975092 | 20001024 |
| | | | WO 1999-SE2052 | A 19991111 |
| | | | SE 2000-782 | A 20000309 |
| US 6630162 | B1 | 20031007 | US 2000-708428 | 20001109 |
| | | | WO 1999-SE2052 | A2 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | US 2000-202862P | P 20000510 |
| ZA 2001003575 | A | 20020503 | ZA 2001-3575 | 20010503 |
| | | | SE 1998-3871 | A 19981111 |
| NO 2001002314 | A | 20010709 | NO 2001-2314 | 20010510 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| HR 2001000333 | A1 | 20030430 | HR 2001-333 | 20010510 |
| HR 20010333 | B1 | 20041031 | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |
| BG 105582 | A | 20011231 | BG 2001-105582 | 20010608 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |
| | | | WO 1999-SE2052 | W 19991111 |

| | | | | |
|---------------|----|----------|----------------|------------|
| HK 1040917 | A1 | 20050527 | HK 2002-102521 | 20020404 |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | A 19990826 |
| ZA 2002002767 | A | 20030409 | WO 1999-SE2052 | A 19991111 |
| | | | ZA 2002-2767 | 20020409 |
| NO 2002002264 | A | 20020513 | WO 1999-SE2052 | A 19991111 |
| | | | NO 2002-2264 | 20020513 |
| | | | WO 1999-SE2052 | W 19991111 |
| | | | SE 2000-782 | A 20000309 |
| | | | WO 2000-SE2061 | W 20001024 |

| | | | | |
|---------------|--|----------|----------------|-----------------|
| FAN | 2003:784592 | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. |
| | ----- | ---- | ----- | ----- |
| PI | US 6630162 | B1 | 20031007 | US 2000-708428 |
| | | | | WO 1999-SE2052 |
| | | | | SE 2000-782 |
| | | | | US 2000-202862P |
| | | | | WO 1999-SE2052 |
| | | | | 19991111 |
| WO 2000027364 | A1 | 20000518 | | |
| W: | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | |
| RW: | GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | |
| | | | SE 1998-3871 | A 19981111 |
| | | | WO 1999-SE1463 | W 19990826 |

AB The invention relates to a pharmaceutical formulation containing tolterodine or a tolterodine-related compound, or a pharmacol. acceptable salt thereof, as active ingredient, in which the formulation exhibits a controlled in vitro release of the active ingredient in phosphate buffer at pH 6.8 of not less than about 80 after 18 h, and after oral administration to a patient is capable of maintaining a substantially constant serum level of the active moiety or moieties for 24 h. The invention also relates to the use of the pharmaceutical formulation for treating overactive bladder and gastrointestinal disorders. Controlled release beads and capsules comprising multilayers were prepared containing tolterodine L-tartrate were prepared

IT 209747-05-7
 RL: BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (pharmaceutical formulation containing tolterodine for bladder disorders)

RN 209747-05-7 CAPLUS

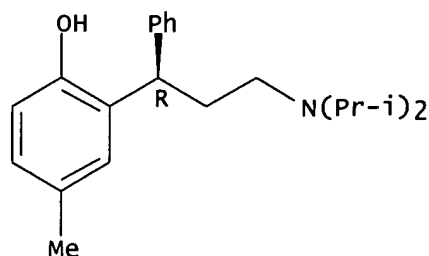
CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5

CMF C22 H31 N O

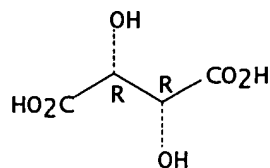
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1998:490465 CAPLUS
 DN 129:95317
 TI Preparation of tolterodine via 3,4-dihydro-6-methyl-4-phenyl-2H-benzopyran-2-ol as an intermediate.
 IN Gage, James R.; Cabaj, John E.
 PA Pharmacia and Upjohn Co., USA
 SO PCT Int. Appl., 14 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| PI WO 9829402 | A1 | 19980709 | WO 1997-US22521 | 19971218 |
| W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| CA 2273789 | AA | 19980709 | US 1996-33961P | P 19961213 |
| CA 2273789 | C | 20060606 | CA 1997-2273789 | 19971218 |
| | | | US 1996-33961P | P 19961213 |
| | | | WO 1997-US22521 | W 19971218 |
| AU 9859569 | A1 | 19980731 | AU 1998-59569 | 19971218 |
| AU 717985 | B2 | 20000406 | | |
| | | | US 1996-33961P | P 19961213 |

| | | | | | |
|---|----|----------|-----------------|---|----------|
| US 5922914 | A | 19990713 | WO 1997-US22521 | W | 19971218 |
| | | | US 1997-993257 | | 19971218 |
| EP 960109 | A1 | 19991201 | US 1996-33961P | P | 19961213 |
| EP 960109 | B1 | 20021030 | EP 1997-954678 | | 19971218 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | | |
| | | | US 1996-33961P | P | 19961213 |
| | | | WO 1997-US22521 | W | 19971218 |
| CN 1238768 | A | 19991215 | CN 1997-180147 | | 19971218 |
| | | | US 1996-33961P | P | 19961213 |
| NZ 336533 | A | 20000526 | NZ 1997-336533 | | 19971218 |
| | | | US 1996-33961P | P | 19961213 |
| | | | WO 1997-US22521 | W | 19971218 |
| JP 2001507691 | T2 | 20010612 | JP 1998-530030 | | 19971218 |
| | | | US 1996-33961P | P | 19961213 |
| | | | WO 1997-US22521 | W | 19971218 |
| RU 2176246 | C2 | 20011127 | RU 1999-116356 | | 19971218 |
| | | | US 1996-33961P | P | 19961213 |
| | | | WO 1997-US22521 | W | 19971218 |
| HU 200000527 | A2 | 20011128 | HU 2000-527 | | 19971218 |
| | | | US 1996-33961P | P | 19961213 |
| | | | WO 1997-US22521 | W | 19971218 |
| AT 226949 | E | 20021115 | AT 1997-954678 | | 19971218 |
| | | | US 1996-33961P | P | 19961213 |
| | | | WO 1997-US22521 | W | 19971218 |
| ES 2186018 | T3 | 20030501 | ES 1997-954678 | | 19971218 |
| | | | US 1996-33961P | P | 19961213 |
| SK 283591 | B6 | 20031007 | SK 1999-815 | | 19971218 |
| | | | US 1996-33961P | P | 19961213 |
| | | | WO 1997-US22521 | W | 19971218 |
| CZ 295477 | B6 | 20050817 | CZ 1999-2272 | | 19971218 |
| | | | US 1996-33961P | P | 19961213 |
| PL 191603 | B1 | 20060630 | PL 1997-334375 | | 19971218 |
| | | | US 1996-33961P | P | 19961213 |
| | | | WO 1997-US22521 | W | 19971218 |
| FI 9901477 | A | 19990629 | FI 1999-1477 | | 19990629 |
| | | | US 1996-33961P | P | 19961213 |
| | | | WO 1997-US22521 | W | 19971218 |
| NO 9903247 | A | 19990809 | NO 1999-3247 | | 19990629 |
| NO 317158 | B1 | 20040830 | | | |
| | | | US 1996-33961P | P | 19961213 |
| | | | WO 1997-US22521 | W | 19971218 |
| HK 1023566 | A1 | 20040924 | HK 2000-102580 | | 20000428 |
| | | | US 1996-33961P | P | 19961213 |
| | | | WO 1997-US22521 | W | 19971218 |

OS CASREACT 129:95317

AB Novel intermediate 3,4-dihydro-6-methyl-4-phenyl-2H-benzopyran-2-ol (I) and an improved process for the preparation of tolterodine using I are claimed. Thus, a mixture of I and (Me₂CH)₂NH in MeOH was hydrogenated over Pd/C at 45-50° and 48° for ca. 10 h followed by addition of HCl to give tolterodine hydrochloride.

IT 209747-05-7P, (R)-Tolterodine L-tartrate

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of tolterodine via 3,4-dihydro-6-methyl-4-phenyl-2H-benzopyran-2-ol as an intermediate)

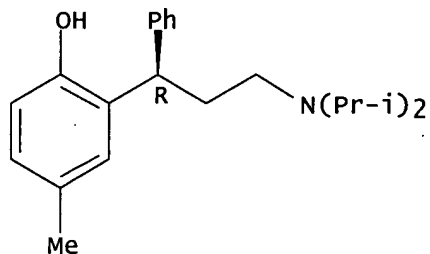
RN 209747-05-7 CAPLUS

CN Phenol, 2-[(1R)-3-[bis(1-methylethyl)amino]-1-phenylpropyl]-4-methyl-, (2R,3R)-2,3-dihydroxybutanedioate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 124937-51-5
CMF C22 H31 N O

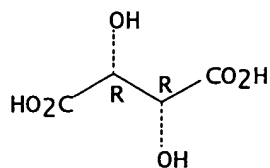
Absolute stereochemistry. Rotation (+).



CM 2

CRN 87-69-4
CMF C4 H6 O6

Absolute stereochemistry.



RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT